ANNUAL SITE ENVIRONMENTAL REPORT
FOR CALENDAR YEAR 2004

United States Department of Energy
Western Area Power Administration
Environment
12155 W. Alameda Parkway
Lakewood, Colorado 80228

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2004 ANNUAL SITE ENVIRONMENTAL REPORT
WESTERN AREA POWER ADMINISTRATION

EXECUTIVE SUMMARY

This document outlines the accomplishments and status of the environmental program of the Western Area Power Administration (Western) for calendar year 2004.

In 2004, Western submitted Emergency Planning and Community Right-to-Know Act reports for 189 sites. These reports identify the hazardous substances contained at these sites and are submitted to state and local emergency response personnel. For sites where potential oil spills could harm surrounding ecosystems and waterways, Western prepares Spill Prevention Control and Countermeasure (SPCC) plans. These plans identify measures to prevent spills from harming the environment, such as identifying the need for secondary containment at facilities. Western currently has SPCC plans for 154 facilities in 13 states. In 2004, Western updated 26 SPCC plans and prepared one new plan.

Western evaluates the impact of its planned actions on the environment by preparing National Environmental Policy Act documents. In 2004, Western completed or was working on 45 categorical exclusions, 11 environmental assessments, four environmental impact statements, issued one record of decision, and two findings of no significant impact. Western held several public workshops/meetings and consulted with more than 48 American Indian Tribes for various projects. In 2004, Western was working on or had completed eight Section 7 consultations under the Endangered Species Act.

In 2004, Western recycled over 3,200 metric tons of electrical equipment, mineral oil dielectric fluid, asphalt, fluorescent and metal halide light bulbs, wood poles and crossarms, and other items as well as office waste. Western made $371,249 worth of purchases containing recovered content materials.

Western continues to make progress in documenting its Environmental Management System (EMS) and meeting EMS performance goals.

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List of Acronyms and Abbreviations

APLIC	Avian Power Line Interaction Committee
CAA	Clean Air Act (42 U.S.C. §§ 7401 *et seq.* (1970))
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601 *et seq.* (1980))
COTP	California-Oregon Transmission Project
CRSP	Colorado River Storage Project
CWA	Clean Water Act (33 U.S.C. §§ 1251 *et seq.* (1972))
CX	Categorical Exclusion
CY	Calendar Year
Docket	Hazardous Waste Compliance Docket
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EA	Environmental Assessments
EIS	Environmental Impact Statement
EMS	Environmental Management System
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act (42 U.S.C. §§ 11001 *et seq.* (1986))
EPRI	Electric Power Research Institute
ESA	Endangered Species Act (16 U.S.C. § 153 *et seq.* (1973))
FEMP	Federal Energy Management Program
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. §§ 135 *et seq.* (1972))
GIS	Geographical Information System
HMTA	Hazardous Material Transportation Act (49 U.S.C. §§ 5101 *et seq.* (1976))
HSWA	Hazardous and Solid Waste Amendments of 1984 [*see* RCRA]
IVM	Integrated Vegetation Management
kV	Kilovolt
MAP	Mitigation Action Plan
MOSES	Mineral Oil Spill Evaluation System
MW	Megawatt

NAGPRA	Native American Graves Protection and Repatriation Act (25 U.S.C. §§ 3001, *et seq.* (1990))
NEPA	National Environmental Policy Act (42 U.S.C. §§ 4321-4347 (1969))
NHPA	National Historic Preservation Act (16 U.S.C. § 470a, *et seq.* (1966))
NOA	Notice of Availability
NOV	Notice of Violation
PCB	Polychlorinated biphenyls
PRP	Potentially Responsible Party
Reclamation	U.S. Bureau of Reclamation
RCRA	Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 *et seq.* (1976))
ROD	Record of Decision
ROW	Right-of-Way
RUS	Rural Utility Service
SARA	Superfund Amendments and Reauthorization Act (42 U.S.C. §§ 9601 *et seq.* (1986))
SDWA	Safe Drinking Water Act (42 U.S.C. §§ 300 *et seq.* (1974))
SHPO	State Historic Preservation Officer
SF_6	Sulfur hexafluoride gas
SPCC	Spill Prevention, Control and Countermeasures
TRC	Tradable Renewable Certificate
TSCA	Toxic Substances Control Act (15 U.S.C. §§ 2601 *et seq.* (1976))
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
Western	Western Area Power Administration

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1.0 Introduction

Western Area Power Administration (Western) was established December 21, 1977, under the Department of Energy (DOE) Organization Act (Section 302 of Public Law 95-91). Western markets Federal electric power in 15 western states, encompassing a 1.3 million-square-mile geographic area (Figure 1).

Western operates and maintains about 17,000 miles of transmission, 272 substations and various other power facilities in its service territory. Western markets about 10,000 megawatts of power generated at 56 hydroelectric power-generating plants in the western United States that are operated by the U.S. Bureau of Reclamation (Reclamation), the U.S. Army Corps of Engineers (USACE), and the U.S. Section of the International Boundary and Water Commission. Western also markets the United State's entitlement from the Navajo coal-fired power plant near Page, Arizona.

In Fiscal Year 2004, Western sold about 40 billion kilowatt hours of electricity and generated more than $833 million in power revenues. Western sells power to 678 wholesale power customers, who, in turn, provide service to millions of retail consumers. Western's customers include rural cooperatives, municipalities, public utility districts, Federal and State agencies, irrigation districts, Native American tribes, and project use customers. Customers are located in Arizona, California, Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Texas, Utah, and Wyoming.

Western's organization is managed from it's Corporate Services Office in Lakewood, Colorado; four regional Customer Service Offices located in Billings, Montana (Upper Great Plains Region); Phoenix, Arizona (Desert Southwest Region); Loveland, Colorado (Rocky Mountain Region); and Folsom, California (Sierra Nevada Region); and the Colorado River Storage Project (CRSP) Management Center, in Salt Lake City, Utah, as shown in Figure 1. Through its power marketing and transmission program, Western secures revenues to recover operating, maintenance and purchase power expenses to repay the Federal investment in generation and transmission facilities.

Western's environmental program spans a broad range of environmental concerns due to the varied geographical locations and types of activities routinely performed. Western falls within the jurisdiction of six Environmental Protection Agency (EPA) regions, as well as the 15 state and numerous local jurisdictions where Western's facilities are located.

Western's facilities generate hazardous and non-hazardous waste as a byproduct of maintaining electrical equipment, warehouses and maintenance and office facilities. Western's substations and maintenance facilities house equipment containing dielectric oil, hazardous gasses, petroleum and other pollutants that may affect water, soil and air resources. Western's transmission lines cross a variety of ecosystems such as forests, wetlands, grasslands and deserts. Maintaining these transmission lines could affect sensitive biological and cultural resources. Western's Environmental Policy Statement directs employees to prevent, control and abate environmental pollution at their facilities and when possible, enhance the environment.

This Annual Site Environmental Report meets the requirements of DOE Order 231.1A, Environment, Safety and Health Reporting.

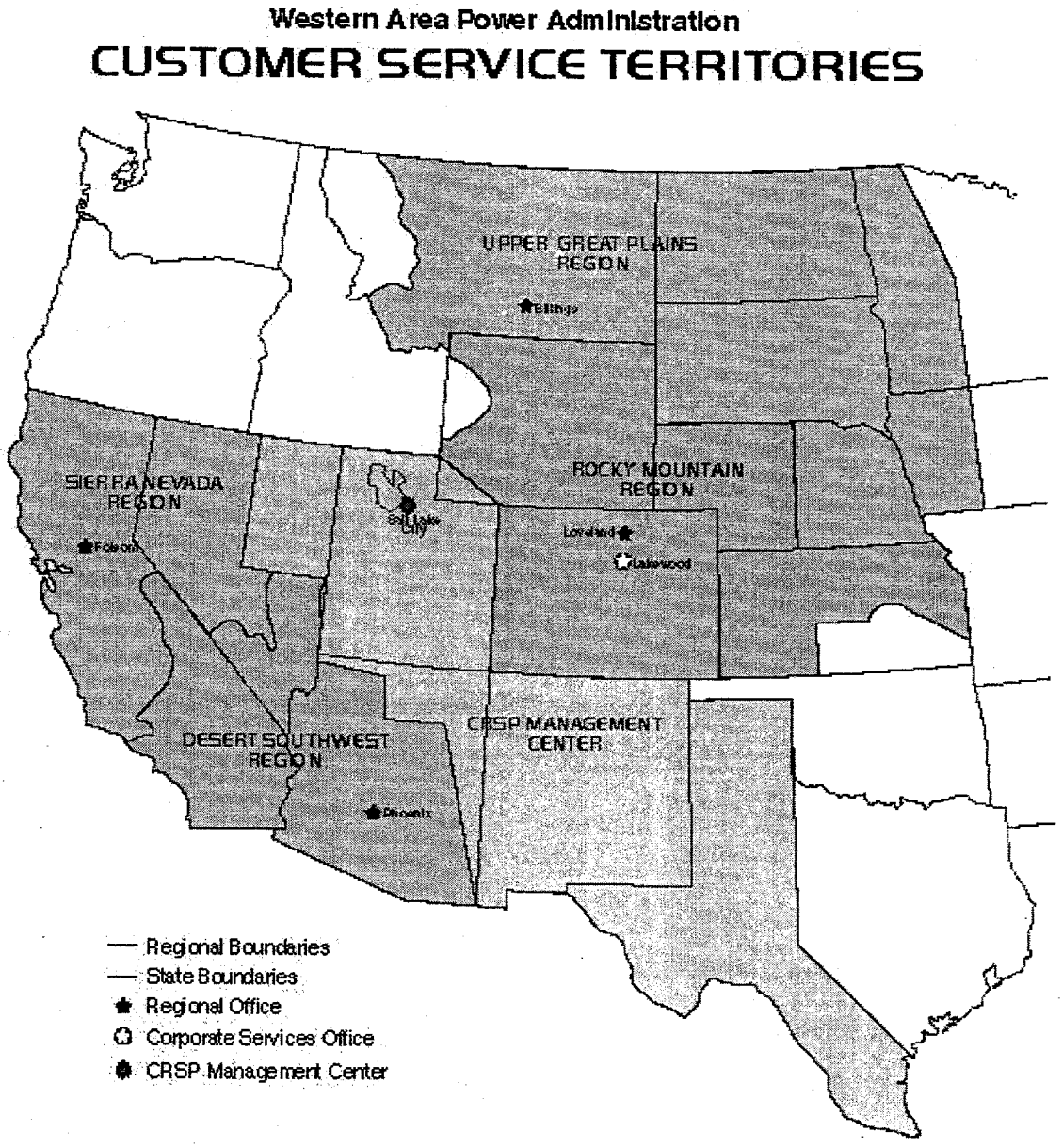

Figure 1: Western's Territory and Regional Office Location

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2.0 Compliance Summary

2.1 Introduction

Many Federal and State environmental protection laws and regulations apply to Western's activities. Western's Environmental Policy directs employees on environmental matters to assure that we conform to all regulatory requirements, and to achieve our pollution prevention goals and objectives. To better achieve our environmental goals, Western is formalizing its environmental program by developing an Environmental Management System (EMS).

2.2 Environmental Policy Statement

In 2002, Western revised its Environmental Policy. The policy states that:

> Western will conduct its business of marketing and delivering reliable, cost-based hydroelectric power and related services in an environmentally sound manner, efficiently and effectively complying with the letter, spirit, and intent of applicable environmental statutes, regulations, and standards. We believe protecting the environment is a sound business practice. Western is committed to pollution prevention and waste minimization.
>
> Western will use effective planning to mitigate the environmental impacts of its actions. Western is committed to continual improvement of its environmental performance by monitoring and reviewing its policies, programs and services.
>
> Environmental protection is everyone's responsibility.

The Policy became effective on December 12, 2002. No changes were implemented in 2004.

2.3 Major Environmental Regulations

Environmental regulations that require the greatest expenditure of resources are summarized here:

Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) provides guidelines and procedures to respond to releases and threatened releases of hazardous substances, pollutants or contaminants, as well as to clean up closed and abandoned hazardous waste sites. CERCLA was reauthorized in 1986 with the Superfund Amendments and Reauthorization Act (SARA). Title III of SARA includes the Emergency Planning and Community Right-to-Know Act (EPCRA), which was designated to help local communities protect public health, safety, and the environment from chemical hazards. As part of its compliance with EPCRA requirements, Western facilities submit information under EPCRA Sections 311 and 312 (Tier I and Tier II reports) annually to state and local response entities. These reports notify state and local agencies of the inventory of hazardous chemicals at each reported facility, as well as provide emergency response information.

Resource Conservation and Recovery Act

Western produces hazardous and non-hazardous waste as a byproduct of our operations. These wastes are managed following applicable waste management laws and regulations, such as those outlined in the Resource Conservation and Recovery Act (RCRA), Hazardous and Solid Waste Amendments of 1984 (HSWA), hazardous waste transportation and state hazardous waste and transportation programs.

Under RCRA, Western prepares an annual Waste Minimization/Pollution Prevention report and Affirmative Procurement report. This report includes Western's effort to reduce landfill mass by recycling materials as much as possible and purchasing recycled-content materials.

EPA amended RCRA in 1995 with the Universal Waste Rule. This Rule is designed to reduce the amount of hazardous waste items in the municipal solid waste stream, encourage recycling and proper disposal of certain common hazardous wastes and reduce the regulatory burden on businesses that generate these wastes. In 1999, EPA added used fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium and metal halide lamps that contain mercury and lead to the rule. Western applies this new rule to used batteries, lamp disposals and other waste products.

Clean Air Act

The Clean Air Act (CAA) provides the principal framework for national, state and local efforts to protect air quality. Western's primary concern is reducing air pollutants from construction activities, including dust suppression and asbestos removal. Because of the age of many of our facilities, asbestos surveys are conducted annually as part of Western's facility maintenance program. Emergency generators and above ground petroleum/diesel tanks may require county or state air permits.

Clean Water Act

The primary responsibility of the Clean Water Act (CWA) is protecting the nation's water supply from pollutants, including planned discharges, runoff and prevention of accidental contamination. Within the CWA requirements, Western evaluates the potential for discharges to water sources from construction and routine maintenance activities. When required, Western prepares Spill Prevention Control and Countermeasures (SPCC) plans for new facilities and evaluates and updates SPCC plans every three years for existing facilities. In 2002, the requirements for preparing SPCC plans were revised. In response, Western revised many of its SPCC plans for its facilities in 2003 and continued updating SPCC plans in 2004.

Section 404 of the CWA governs disposal of dredged or fill material in waters of the United States. Western applies to the USACE for a permit for activities that would impact waters of the United States. In 2003, the Federal Phase II Storm Water Regulations went into effect to reduce the impact to small municipal storm sewer systems and construction sites that disturb one to five acres of land. Western is required to prepare storm water pollution prevention plans as part of a National Pollutant Discharge Elimination System permit for construction and maintenance activities subject to this regulation. Western monitors compliance with storm water pollution prevention plans during construction to ensure that Federal, state and local regulations are followed.

Toxic Substances Control Act

A significant law affecting Western operations continues to be the Toxic Substances Control Act (TSCA), which regulates polychlorinated biphenyls (PCB). PCBs have historically been a component of dielectric oil used in electrical equipment. Western's policy since 1979 has been to eliminate PCBs from its system wherever economically and operationally possible. This lessens the impact of PCB regulations on operations and the potential impact of PCBs on the environment. In April 2001, EPA issued a final rule reclassifying PCB and PCB-contaminated electrical equipment that requires Western to reevaluate, test and re-label our electrical equipment that contains PCBs. Western continues implementation of this rule.

National Environmental Policy Act

Western follows the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR parts 1500-1508) and DOE's Procedures for Implementing NEPA (10 CFR part 1021). DOE has delegated Western the authority to approve its own environmental assessments (EA) and many environmental impact statements (EIS). In September 1998, Western was delegated cooperating agency determination authority, which allows Western to adopt other agency EISs where Western is a cooperating agency. Three regional managers and the CRSP manager have been delegated the authority to approve their own EAs. These delegations have shortened the environmental process and provided for project decisions to be made closer to the project level. Most of Western's routine activities are covered by categorical exclusions (CX).

Western prepares NEPA documents for contracts, rate changes, construction activities, routine maintenance, interconnections and other activities. Western's environmental planning process includes early public and agency involvement in proposed projects. This, along with early internal scoping of environmental issues, helps to identify potentially significant impacts. The National Historic Preservation Act (NHPA), Endangered Species Act (ESA), and Migratory Bird Treaty Act (MBTA) are addressed when a NEPA document is prepared for a project, where appropriate.

3.0 Executive Orders

As a Federal agency, Western is required to comply with Executive Orders (EO) issued by the President of the United States. A summary of some of the significant orders impacting Western is presented here:

EO 11988, Floodplain Management and 11990, Protection of Wetlands, require Federal agencies to conserve wetlands and manage floodplains where they are encountered in proposed actions. DOE requires Floodplain/Wetland involvement notices on all appropriate projects, usually as part of the NEPA process.

EO 12088, Federal Compliance with Pollution Control Standards, requires Federal agencies to comply with EPA and state and local environmental regulations. Examples of the regulations enforced at state and local levels include RCRA, community right-to-know, pesticide application and storage tank regulations.

EO 12843, Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances, requires Federal agencies to phase out the use of ozone-depleting substances where practical. This is to be accomplished through cost-effective procurement practices and by substituting safe alternative substances.

EO 12856, Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements, requires Federal agencies to comply with EPCRA and keep communities surrounding Federal facilities informed of an agency's hazardous materials management and emergency management procedures. Western's regional offices implemented programs to notify state and local emergency response entities under Sections 311 and 312 (Tier I and II reports) of EPCRA. Chemical inventories indicate that Western does not manufacture, process or otherwise use reportable quantities of EPCRA Section 313 chemicals, so Toxic Release reports were not required.

EO 12873, Federal Acquisition, Recycling and Waste Prevention, requires that Federal agencies develop and maintain acquisition, recycling and waste prevention programs. Purchase of certain goods containing recycled materials is mandated and waste prevention and recycling goals have been developed.

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, is designed to focus Federal attention on the environmental and human health conditions in minority and low-income communities with the goal of achieving environmental justice. Western addresses this EO in NEPA actions where appropriate.

EO 13101, Greening the Government through Waste Prevention, Recycling and Federal Acquisition, mandates that Federal agencies establish systems, schedules, plans and goals for waste prevention, recycling and acquisition. Western's pollution prevention plans, reports and affirmative procurement actions are mainly in response to this order.

EO 13123, Greening the Government through Efficient Energy Management, requires Federal agencies to efficiently manage energy to minimize impacts to the environment. Western has established goals and procedures to minimize internal use of energy, maximize the use of green energy and evaluate various sources of energy to determine relative environmental impacts.

EO 13148, Greening the Government through Leadership in Environmental Management, requires Federal agencies to improve environmental performance through the use of management systems and aggressive pollution prevention initiatives. Western began developing a formal EMS in 1995 and has formal pollution prevention plans. The order also requires the 50-percent reduction of certain chemicals at Federal agencies by December 31, 2006. The Department of Energy is working with a multi-federal agency task force to finalize the list of chemicals.

EO 13149, Greening the Government through Federal Fleet and Transportation Efficiency, requires Federal agencies to exercise leadership to reduce petroleum consumption through fuel efficiencies, alternative fueled vehicles, and transportation strategies. Western leases alternative fueled vehicles and stocks renewable-based fuels at some locations.

EO 13175, Consultation and Coordination with Indian Tribal Governments, requires Federal agencies to establish regular and meaningful consultation and collaboration with tribal officials in developing Federal policies that have tribal implications. Western has many

facilities on tribal lands and coordinates with numerous Native American tribes on projects on tribal lands, or where tribal cultures may be impacted.

EO 13212, Actions to Expedite Energy Projects, requires Federal agencies to expedite their review of permits or take other actions to speed up such projects, while maintaining safety, public health and environmental protections. This EO applies to Western's interconnection projects, where private proponents request to connect to the energy grid through Western's transmission system. Western has worked with the California Energy Commission and other Federal agencies to coordinate and streamline the environmental process for interconnections in California.

3.1 Department Of Energy Requirements

Western complies with DOE Orders and Guidelines. Applicable environmental Orders include:

DOE Order 231.1A, Environment, Safety, and Health Reporting, sets forth the requirements and responsibilities for DOE elements to prepare annual summary reports to the Secretary of Energy on the results of environment, safety, and health assessments conducted in the previous year. These activities include NEPA planning summaries and progress on mitigation measures, as well as an Annual Site Environmental Report. Western also developed environmental incident reporting procedures as required by the order.

DOE Order 450.1, Environmental Protection Program, requires Western to implement sound environmental stewardship practices that protect air, water, land and other natural and cultural resources, while cost effectively meeting or exceeding compliance with applicable environmental, public health and resource protection laws, regulations and DOE requirements. This is accomplished by implementing an EMS.

DOE Order 451.1B, National Environmental Policy Act Compliance Program, establishes DOE internal requirements and responsibilities for implementing NEPA, the CEQ Regulations Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), and the DOE NEPA Implementing Procedures (10 CFR Part 1021).

DOE Order 5480.4, Environmental Protection, Safety, and Health Protection Standards, specifies the requirements for environmental protection, safety and health standards.

3.2 Western Requirements

WAPA Order 450.1A, Environmental Considerations in the Planning, Design, Construction, and Maintenance of Power Facilities and Activities, establishes policy, assigns responsibilities and delegates authority to ensure that marketing and rate-setting activities and activities associated with planning, design, construction, operation and maintenance of power facilities by Western comply with Federal, state and local environmental laws and regulations.

The Environmental Management System Handbook outlines how the environmental policy is carried out throughout the organizations. The EMS Handbook describes roles and responsibilities for environmental performance for all employees. The EMS Handbook was approved in April 2004.

3.3 Compliance Cleanup Agreements

Western did not operate under any Compliance Cleanup Agreements in 2004.

3.4 Environmental Violations

Western did not receive any Notices of Violation (NOV) at any facility in 2004.

3.5 Reportable Occurrences

In 2004, Western experienced two reportable occurrences of releases of regulated materials; one in Iowa and one in Montana. Additional information on these spills is located in Section 3.2.

3.6 Self-Assessments or Audits

During the last several years, Western has undertaken an effort to complete self-assessments of all the elements that comprise our current environmental management system. In 2004, Western continued to implement corrective actions by preparing EMS documentation.

Western also conducts facility inspections to ensure compliance with Federal and state environmental laws and regulations. Western inspected 152 facilities in 2004.

3.7 Existing Permits

Information on existing permits is provided in Section 4.0. One hundred and one permits were obtained in 2004.

3.8 Voluntary Actions to Control Greenhouse Gases

The Intergovernmental Panel on Climate Change has identified sulfur hexaflouride (SF_6) as an extremely potent greenhouse gas. EPA believes that reducing emissions of this gas will help to address global climate change and has developed a voluntary program in which Western is participating. Western is taking voluntary action to reduce the amount of SF_6 lost to the atmosphere from system operation and maintenance. Western detects SF_6 leaks by using a special laser camera that makes leaks visible. An annual SF_6 emissions reduction report is prepared and distributed internally and externally, including to EPA.

3.9 State and Local Environmental Requirements

Western has facilities in 15 western states. EO 12088, Federal Compliance with Pollution Control Standards, requires Federal agencies to comply with EPA and state and local environmental regulations. Examples of the regulations enforced at state and local levels include RCRA, community right-to-know, pesticide application and storage tank regulations. Most of the states in Western's service area regulate generation, transportation, treatment, storage and disposal of hazardous and toxic materials. Community right-to-know legislation and hazardous waste clean-up laws, enacted by numerous states, are increasing the control of tracking hazardous and toxic materials.

Western cooperates with state and local environmental regulators to help ensure compliance with applicable laws, statutes, regulations, and ordinances. Environmental audits of Western facilities address applicable state and local requirements in addition to those imposed by the Federal government. Additionally, Western's regional environmental staff has developed annual chemical inventory programs and provides CERCLA Section 311 and 312 reports to local emergency response entities.

4.0 Compliance Status

This section provides an overview of Western's compliance status for calendar year 2004.

4.1 Comprehensive Environmental Response, Compensation, and Liability Act

Superfund Amendments and Re-authorization Act

The Federal Agency Hazardous Waste Compliance Docket (Docket) is a list of facilities under Federal control that have the potential for environmental releases that could adversely affect human health or the environment. In 2004, four sites remained listed on the Docket, including the Montrose Operations Center, Watertown Substation, Casper Field Branch [Office], and the Liberty Substation. Assessments conducted at these sites show that they pose no risk to human health or the environment. Western continues to work with EPA to have these facilities removed from the Docket.

In 2004, Western conducted two facility evaluations under Section 120(h) of CERCLA. The Helicopter Hanger at the Montrose Airport in Colorado was inspected before its transfer in October of 2004. The property met environmental requirements for transfer. The Kremmling Maintenance Facility will be evaluated by sampling the sump and soil from the site during 2005. Once the samples are analyzed, the sediment will be removed from the sump and disposed of properly. In 2003, the Monarch Microwave Site in Colorado was tested for lead paint and asbestos. No contaminants were found. The site was not transferred as planned, and Western retains ownership of this facility.

Emergency Planning, Community Right-to-Know Act

Western conducts annual inventories of chemicals at facilities throughout its service area. The information gathered is used to prepare the Sections 311 and/or 312 (Tier I and II) reports to state and local emergency response entities. In 2004, Western submitted Tier II reports for 189 facilities, as listed in Appendix A. These inventories are also used to verify that Western does not manufacture, process or otherwise use threshold quantities of any of the chemicals identified in Section 313 of EPCRA (Tier III) and does not report under that section.

4.2 Resource Conservation and Recovery Act

Under RCRA, Western is required to manage hazardous and non-hazardous materials and waste to protect human health and the environment.

Hazardous and Solid Waste Amendments of 1984 (HSWA)

HSWA-based regulations impact most Western facilities, which are classified as conditionally exempt small quantity generators of hazardous waste. HSWA also impacts Western operations by prohibiting the land disposal of hazardous wastes and by setting standards for used oil management, underground storage tanks, and recycling hazardous wastes. Western has increased recycling of these types of wastes, and continues to look for opportunities to recycle. A full report of Western's recycling activities is included in Section 5 of this report.

Universal Waste

In 2004, Western continued recycling materials from its facilities under the Universal Waste Rule. Items such as fluorescent lamps, metal halide lamps, vapor mercury lamps, small rechargeable batteries, lead/acid batteries, aerosol cans, mercury containing devices and electronic devices are recycled. See Section 5 for further discussion of Western's recycling program.

Underground Storage Tanks

Western has two Underground Storage Tanks (USTs) in Arizona and one in Colorado that require annual permits to comply with state regulations. Western complies with the EPA's UST upgrade and monitoring requirements.

Hazardous Material Spills

Western responded to two spills of hazardous materials in 2004 as listed in Table 3-1. Western takes immediate action to clean up spills and notifies the appropriate state and Federal agencies for spills above reportable limits. Western also routinely cleans up small leaks and drips around oil-filled equipment on an as-needed basis.

Table 3-1: 2004 Hazardous Material Spills

Date	Contaminant/ Amount	Location	Status	Notifications
August	Approximately 500 gallons mineral oil	Creston Substation, IA	Cleaned up	Iowa Department of Natural Resources
October	73 gallons PCB-free oil	Yellowtail Switchyard near Fort Smith, MT	Cleaned up	Montana Department of Environmental Quality

4.3 Clean Air Act

Emissions

Several potential sources of air emissions exist at Western facilities that are regulated under the CAA. These emissions include dust during construction activities, friable asbestos during building renovation or demolition and volatile organic compound emissions from gasoline dispensing facilities. Western's construction specifications require practical methods and devices to control, prevent and minimize emissions or discharges of air contaminants during construction activities. Particulate emissions from construction activities along access and haul roads are controlled by periodic watering of disturbed soils, where required.

Asbestos

Regulatory requirements applicable to the disposal of asbestos and asbestos-containing material affect Western when activities are planned to modify or demolish existing buildings or equipment. Western personnel notify all appropriate regulatory agencies when planning any renovation and demolition project that might include asbestos and obtain appropriate permits for asbestos removal. In addition to Federal regulations, state and local laws and regulations are followed to assure proper disposal of asbestos containing material. In 2004, Western sampled for asbestos at 10 sites. Three of the sites were below regulatory limits and no asbestos was found at five sites. Two sites required abatement, which was completed in 2004.

Ozone-Depleting Substances

EO 12843, Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances, and implementing DOE guidance (Guidance on the DOE Facility Phase out of Ozone-Depleting Substances) requires Western to phase out the use, where practical, of ozone-depleting substances. This is to be accomplished through cost-effective procurement practices and substituting safe alternative substances.

The phase out of ozone-depleting substances affects Western's operations associated with refrigeration and air conditioning, solvent usage and fire protection. As equipment is replaced, ozone-depleting substances are recovered in air conditioning, refrigeration systems and fire suppression systems before final disposal or dismantling. Older appliances containing icemakers using R-12 gas are replaced with chlorofluorocarbon (CFC) free units. Technician certification is required for all individuals who maintain, service, repair or dispose of appliances, equipment and motor vehicle air conditioners containing Class I or Class II refrigerants. The use of ozone–depleting solvents has been drastically reduced. Almost all past inventories have been eliminated or disposed of appropriately.

The Corporate Services Office and most of the Regional Offices have phased out halon-containing hand held fire extinguishing equipment for all but a few uses. Several of the regions have also phased out halon-based large fire suppression systems. These fire suppression systems and equipment were replaced with carbon dioxide, dry chemical extinguishers and other approved chemical replacements.

Greenhouse Gases

Western has approximately 750 SF_6 gas-filled circuit breakers in use. In 2000, EPA invited Western, along with other electric utilities, to take part in a voluntary program to reduce SF_6 gas emissions. Western determined the best way to participate was to develop an alternative plan that is proactive in finding and stopping SF_6 leaks rather than just reporting SF_6 emissions as is outlined in the EPA program. In 2004, Western continued evaluating equipment, locating several leaks, and either immediately repairing them, or scheduling repairs or replacement. A tracking system was developed to track the amount of SF_6 gas

leaking to the atmosphere from Western's equipment and a database is being finalized to improve the ease of tracking. An annual SF_6 emissions reduction report is prepared and distributed internally and externally, including a report to the EPA.

4.4 Clean Water Act

Spill Prevention, Control, and Countermeasures Plans

Western continues to evaluate facilities to meet SPCC requirements under the CWA. In 2004, Western had 154 SPCC plans in 13 states, as listed in Appendix A. SPCC plans are periodically reviewed for necessary revisions based on new site-specific information, construction or other modifications to the sites, or revised inventories of oil-filled equipment. In 2004, Western updated 26 SPCC plans and prepared one new plan for the Tiber Dam Substation in Montana. Many of these revisions were to meet new SPCC regulations. The Sierra Nevada and Desert Southwest regions have combined SPCC plans with their Hazardous Waste Business Plans for California.

Mineral Oil Spill Evaluation System

The Mineral Oil Spill Evaluation System (MOSES) software developed by the Electric Power Research Institute (EPRI) assists in determining the need for secondary containment and SPCC plans at Western's facilities.

In 2004, Western analyzed two facilities using the MOSES model. Both facilities were identified as requiring secondary containment. Design and installation of secondary containment is incorporated into regional facility maintenance programs.

In addition, another site was evaluated and determined to not need an SPCC plan or secondary containment because the field review determined that there was no flow path to any water target. Therefore, no MOSES analysis was necessary.

Erosion Control

Western evaluates sites for erosion control and erects berms, water flow diversions, matting and other control devices to control or direct water flow at substations, rights-of-way (ROW) and access roads. These measures are taken during construction projects and are also part of

the routine maintenance program. Occasionally these activities require a CWA Section 404 permit from the USACE for fill of waters of the United States. In 2004, one construction project, Path 15 (Los Banos-Gates Transmission Project) required a Section 404 permit.

4.5 Safe Drinking Water Act

Underground Injection Control

Western continues to cooperate with EPA regions and states to obtain permission to permanently close and abandon all Class V underground injection control wells as they are discovered. In 2004, no Class V underground injection control wells were permanently closed or abandoned.

Groundwater Monitoring

The Sierra Nevada Region continued monitoring at the Elverta Maintenance Facility for methyl tertiary-butyl ether, commonly known as MTBE. The groundwater was contaminated from a spill of gasoline during removal of a UST in 1997. Sampling results taken in 2003 indicate elevated MTBE levels in one well. In 2004, four additional monitoring wells were installed down-gradient from the original wells to test for possible spread of the MTBE contamination. Western continues to work closely with Sacramento County to arrive at an acceptable level of remediation for the site and, if 2005 monitoring shows that no spreading has occurred, it is expected that Sacramento County will give permission to close the site.

4.6 Toxic Substances Control Act

Western continued the removal and proper disposal of mineral oil, dielectric fluid, soil and equipment containing PCBs from facilities during 2004.

Western disposed of 57.8 metric tons of TSCA wastes (equipment, debris and soil) in 2004. Low-level PCB contaminated oils were burned for energy recovery at EPA-permitted facilities or were chemically treated and recycled. Higher concentration PCBs were disposed of at EPA-certified incinerators. Contaminated equipment carcasses were decontaminated

and sold as scrap when possible. Items too heavily contaminated for recycling as scrap were disposed of at permitted PCB waste landfills or incinerators.

Western's Rocky Mountain Region reviewed the EPA's PCB regulations regarding the "PCB Free" phrase and developed a simpler labeling scheme to avoid confusion.

4.7 Federal Insecticide, Fungicide, and Rodenticide Act

Western is required to comply with the pesticide use, storage and disposal regulations contained in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), state regulations and some tribal pesticide management regulations. Pesticides are used by Western to control plant and animal pests and for wood preservation. Western has two manuals for implementation of FIFRA, the "Integrated Vegetation Management (IVM) Environmental Guidance Manual" and the "Pest Control Manual." Western's IVM program promotes the use of combined methods to control unwanted vegetation. IVM combines biological, cultural, physical and chemical tools to minimize economic, health and environmental risks. IVM de-emphasizes the exclusive use of chemical control.

Two FIFRA inspections were conducted by state regulatory agencies in 2004, one in Montana and one in North Dakota. No violations were noted.

In 2004, Western was informed of a possible herbicide intrusion from a substation in to surrounding crop land. A subsequent inspection confirmed crop damage incurred from the substation runoff. Western settled with the land owner for crop damage.

4.8 Hazardous Materials Transportation Act

Almost all of the hazardous and toxic material transported for Western is shipped by audited and permitted commercial hazardous materials haulers. However, trained and qualified Western employees occasionally transport hazardous materials. Western's environmental staff provides training on Federal and state hazardous material transportation. In 2004, many of Western's regional offices developed updated training courses for hazardous materials transportation and conducted training sessions for qualified employees.

Hazardous materials transportation requirements for the California Department of Toxic Substances Control, North Dakota Department of Health and Minnesota Pollution Control Agency are more extensive than those of the U.S. Department of Transportation (DOT). Sierra Nevada and Desert Southwest regional offices must have waste haulers' permits to transport PCBs in California. The Upper Great Plains Region maintains permits for hauling all solid waste.

4.9 National Environmental Policy Act

Western continued to review activities for environmental impacts under NEPA. Environmental planning activities fall under three categories: (1) Western projects, including maintenance and upgrades of Western's transmission lines and facilities, power marketing actions and rate changes; (2) cooperating agency projects, where Western acts as a cooperating agency to review other Federal agency actions; and (3) work requested by public or private parties, such as transmission system interconnections and use of Western's transmission towers for telecommunication systems.

Western's NEPA activities are reported in our 2005 Annual NEPA Planning Summary in Appendix B or online at: http://www.eh.doe.gov/nepa/2005aps/WAPANEPAPS2005.pdf. Table 3-2 summarizes Western's 2004 activities.

Table 3-2: 2004 Summary of NEPA Actions

NEPA Action	Western Projects	Cooperating Agency Projects	Private Proponent Projects	Total
CX completed	45	0	0	45
EAs completed	0	0	1	1
EAs in progress	8	0	2	10
EISs completed	0	0	0	0
EISs in progress	0	3	1	4
RODs issued	0	1	0	1
FONSIs issued	0	0	2	2
EIS/EAs suspended or on hold	0	0	1	1
EA's cancelled	0	0	0	0

4.10 National Historic Preservation Act

Western complies with the NHPA by performing cultural and historical resource inventories for construction, maintenance and interconnection activities. These inventories include record searches for previously identified resources and, where necessary, on-site surveys. In 2004, Western initiated or continued previous cultural resource compliance efforts for a number of projects in 13 states (AZ, CA, CO, IA, MN, MT, ND, NE, NM, NV, SD, UT and WY). In accordance with Section 106 of the NHPA, as amended, Western consults on findings from these inventories with the appropriate land-managing agencies, State Historic Preservation Officers (SHPO), Native American Tribal Historic Preservation Officers (THPO) and tribes. In 2004, Western engaged in consultations and coordination with 56 Tribes during the conduct of preservation and cultural compliance and government-to-government consultations. In areas where significant cultural resources are identified, monitors assure that cultural and/or historical resources are not disturbed. Native American monitors worked with Western staff on several projects.

In Arizona, California, Colorado, Nebraska, Utah and Wyoming, Western and the SHPOs have agreed on Section 106 measures for routine maintenance activities through Programmatic Agreements. These agreements streamline the consultation process for projects with a no effect determination. On large projects, Western and other affected parties, along with the SHPOs and Native American tribes enter into Programmatic Agreements. These agreements outline actions to be taken during construction activities to comply with cultural and historical resource preservation laws.

In 2001, Western received a claim for damages to cultural resources from the Quechan Indian Tribe. This issue had yet to be resolved in 2004.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) requires consultation with Indian tribes on repatriation issues. In 2004, Western had no projects on Western fee-owned lands that required NAGPRA consultations.

4.11 Government-to-Government Relations with Indian Tribes

Western seeks to fully comply with the spirit and letter of DOE's American Indian and Alaska Native Tribal Government Policy. This policy sets forth the principles to be followed by departmental officials, staff and contractors regarding fulfillment of trust obligations and other responsibilities that are based on the U.S. Constitution, treaties, Supreme Court decisions, Executive Orders, statutes, existing Federal policies, tribal laws and the dynamic political relationship between Indian nations and the Federal government. Western is actively working to establish and maintain positive and mutually beneficial working relationships with Federally-recognized tribes within its service territory. A full-time Native American Liaison position was established in 2002 to support tribes and Western staff in pursuit of these goals. This position was vacated in 2004 but will be filled in 2005. Consultations will continue into 2005.

4.12 Endangered Species Act

Western consults on Federal, Tribal and state species of concern with the appropriate agencies for all listed, proposed or candidate wildlife and plants. This consultation includes actions ranging from routine maintenance activities to major construction projects. Most of these projects are done in conjunction with a NEPA document and under informal consultation with the USFWS. In 2004, Western was working on or had completed eight Section 7 consultations under the Endangered Species Act, including formal consultations for the Byron Bethany Irrigation District Project in California, Blythe Energy Project 2, in California, Blythe Energy Project 1 Phase 2 in California, Headgate Rock-Blythe Pole Replacement Project in California, Beaver Creek-Hoyt-Erie Rebuild Project in Colorado, Peetz Wind Farm in Colorado, Fiber Optic Replacement in Minnesota and South Dakota, and the Audubon Causeway Bird Collision Studies in North Dakota.

Monitoring for the Path 15 Project in California, as well as for the Shiprock-Four Corners Transmission Rebuild in New Mexico, was completed with distribution of the project's monitoring report in 2004.

Programmatic Biological Opinion for Routine Maintenance Activities

- Fiber Optic Replacement, Minnesota and South Dakota
- Audubon Causeway Bird Collision Studies, North Dakota

Additionally, monitoring for the Path 15 Project in California, as well as for the Shiprock-Four Corners Transmission Rebuild in New Mexico, was completed with distribution of the project's monitoring report in 2004.

Programmatic Biological Opinion for Routine Maintenance Activities

The Sierra Nevada Region has a programmatic biological opinion for routine maintenance activities which streamlines the consultation process for activities that have no effect on endangered species. In 2002, it was amended to allow herbicide application under certain conditions.

4.13 Migratory Bird Treaty Act

Avian Workshops

Western continues working with the Rural Utility Service (RUS), U.S. Forest Service, USFWS, Bureau of Land Management, Reclamation, EPRI, the Avian Power Line Interaction Committee (APLIC) and several investor-owned electric utilities to sponsor workshops on minimizing electrocutions and collisions on electric utility structures. No workshops were conducted in 2004, however, future workshops are being coordinated.

Bird Studies

Western, in conjunction with Bonneville Power Administration, APLIC, EPRI, USFWS, RUS, U.S. Department of Agriculture Wildlife Services, several state agencies and numerous other electric utilities began a multi-year study of bird collisions along the Snake Creek Embankment in central North Dakota in April 2001. A Technical Advisory Group was established that includes environmental organizations, all the above entities, and electric utilities on five continents. The study will identify the spans where collisions are most common. Using this information, those spans will be fixed with a bird strike indicator to identify collisions on the line. The Bird Strike Indicator Study is scheduled for field testing in summer 2006. Following the attachment and testing of the bird strike indicators, marking

devices will be attached to the line to "alert" birds to the presence of the line. These marking devices and the bird strike indicators will be analyzed to determine which marking methods are most effective in reducing collisions. The results of this study should be useful to the wind generation and communication industries, as well as the rest of the electric utility industry, in siting and minimizing bird collisions.

Western is a member of the National Wind Coordinating Committee's Wildlife Working Group that helps resolve bird collisions on wind turbines. In 2004, Western representatives attended three meetings. The group has started to include bat collisions as a problem that needs attention.

Western has been a member of the Avian Power Line Interaction Committee since 1999. This group works in partnership with utilities, resource agencies and the public to: develop and provide educational resources; identify and fund research; develop and provide cost-effective management options; and serve as the focal point for avian interaction utility issues. Western representatives attended both meetings held in 2004.

Line Marking Devices

Western is working with various vendors to test transmission line marking devices designed to minimize bird collisions. These tests are to determine the efficiency of installing the devices, weathering characteristics, and longevity. In 2004, line marking devices were installed on lines in California.

Removal and Relocation of Bird Nests

In 2004, Western received four permits from the USFWS to remove and/or relocate bird nests from electrical equipment and transmission line structures. One was to remove raptor and raven nests from the Bears Ears-Bonanza 345-kV line and three were to remove nuisance birds from substations and/or storage areas at maintenance facilities in Arizona and California. These permits were for one year only.

4.14 Floodplain and Wetland Assessments

Under DOE's Floodplain and Wetland Regulations (10 CFR Part 1022), EO 11988, Floodplain Management and EO 11990, Protection of Wetlands, Western evaluates the impact of its action on floodplains and wetlands and prepares Floodplain/Wetland involvement notices on appropriate projects, usually as part of the NEPA process.

4.15 Mitigation

Western has compiled a list of standard mitigation measures (Appendix C) and construction standards (Appendix D) to assure compliance with environmental laws and regulations. These measures are based on Western's experience with impacts associated with transmission line construction, operation, and maintenance. Along with site specific cultural resource information, programmatic agreements, and biological opinions, they are used to develop Mitigation Action Plans (MAPs), mitigation requirements for CXs and contractor requirements.

In 2004, Western issued or continued Mitigation Action Plans for the Path 15 Transmission Line Upgrade Project in California (Appendix E), the Transmission Line Modifications for the Hoover Dam ByPass Project in Nevada (Appendix F), the Exira Station Project in Iowa (Appendix G), and the Wolf Point-Williston Transmission Line Rebuild Project in Montana and North Dakota (Appendix H). The 2004 status of these mitigation plans is reported in the 2005 NEPA planning summary report found in Appendix B.

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5.0 Summary of Permits

Western is required to obtain a variety of permits, including those for above-ground and underground storage tanks, PCB transportation and storage, hazardous waste storage, gasoline dispensing and pollution discharge elimination system permits for point source and storm water discharge. A full list of permits obtained is listed in Appendix I. Table 4-1 summarizes the list by type and number.

Table 4-1: Summary of Permits by Type

Type of Permit	Number
404 Permit (Clean Water Act)	2
Migratory Bird Treaty Act/Eagle Protection Act	3
Hazardous Waste Transportation	2
Operation	2
Hazardous Materials	82
Water Quality	1
Air Quality	3
Fuel Dispensing	6
Total	**101**

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6.0 Environmental Program Information

6.1 Environmental Management System

Significant progress in converting Western's environmental program into an EMS format was made in 2004. The EMS Handbook, which outlines a systematic process that ensures implementation of environmental requirements and continuous improvement, was approved by Western's senior management team in April 2004.

Western met its four EMS environmental performance goals for 2004. The first goal included completion of all EMS processes and procedures, with a five processes and 11 procedures completed in 2004. Western's Pollution Prevention Program Plan was completed and approved in July 2004, and the Assessment and Corrective Action Program Plan was completed in 2004 and approved in February 2005. Additional program plans will be completed in 2005 to meet the second environmental performance goal to complete all program plans by December 2005.

The third and fourth performance goals are to complete environmental awareness training and self declare that Western's EMS meets the requirements of DOE Order 450.1. In 2004, Western prepared a self-declaration tool and began evaluating the EMS to identify and correct any program gaps and identified appropriate awareness training requirements. These goals are on target for completion by the end of 2005.

6.2 Environmental Auditing Program

Western established an environmental auditing/inspection program in 1980. The major purposes of the auditing program are:

- Discover noncompliance with applicable local, state and Federal regulations.
- Reduce environmental risks.
- Improve communication with facility staff.
- Improve overall environmental performance.
- Provide assistance and discuss compliance alternatives for problem areas.
- Accelerate development of good environmental management practices.

- Ensure worker safety when working with hazardous materials.
- Provide management with a tool for evaluating the priority of compliance issues.

In 2004, environmental staff conducted 152 facility inspections. Additionally, Western's environment staff also conducted audits of four disposal contractors to verify compliance with Federal, state and local environmental laws and regulations.

6.3 Environmental Protection Training

In 2004, Western continued to provide craft workers, new employees and management with guidance and training on environmental protection and compliance. Information and summaries of specific regulations, statutes and compliance issues are covered in non-legal terms to enhance understanding. Training subjects included environmental responsibilities and management systems, environmental standard operating procedures, transportation of hazardous materials transportation, storm water pollution prevention, local air quality regulations, PCB management, waste minimization, affirmative procurement, first responder refresher, NEPA planning, cultural resources awareness, vegetation management and threatened and endangered species and wildlife resources awareness.

6.4 Geographical Information Systems

Western continues to develop and implement a Geographical Information System (GIS) to aid in ROW management and construction activities. The GIS is being used to provide data for environmental staff and maintenance crews to manage cultural, biological, water and other issues within the ROW and access roads. It is also being used to prepare NEPA and cultural resource documents for new construction projects. In 2004, cultural resources information for the Rocky Mountain Region was entered into the database and is available to environmental staff. Processes for mapping in support of environmental surveying were completed. GIS data for 10 projects in the Upper Great Plains Region were added to the GIS library. The GIS supported mapping on the Path 15 Project was also completed. All of this data is shared with Federal, state and local government agencies as the need arises.

6.5 Waste Minimization, Pollution Prevention and Affirmative Procurement

In complying with DOE Order 450.1, and WAPA Order 450.1A, Western developed a Waste Minimization/Pollution Prevention Program Plan. This plan provides guidance to develop and implement a facility-wide, multimedia pollution prevention program within Western.

Specific activities required to meet the plan goals include:

- Conducting pollution prevention opportunity assessments on facilities and operations.
- Incorporating pollution prevention considerations into the acquisition process (e.g. affirmative procurement of recovered content products).
- Developing a workplace ethic to support pollution prevention and increasing awareness of pollution prevention.
- Annual reporting to DOE on the status of Western's Waste Minimization/ Pollution Prevention Program and evaluation of progress toward the Plan goals.

Pollution prevention is incorporated into existing training so that goals, projects and ideas are part of training curriculum or meeting agendas. As a major supplier of electric power, the agency's work results in the production of some potentially toxic byproducts and generation of several types of wastes. Western's construction, demolition and replacement activities generate waste electrical equipment and scrap metal. Western reduces the generation of contaminants, wastes and other regulated materials through source reduction and recycling programs.

Since 1977, Western has reduced the use of PCBs and minimized waste generation through retro-filling equipment and processing to remove PCBs and reusing the oil. Although PCBs have not been completely eliminated, Western continues PCB removal as opportunities are found and budget considerations permit. In 2004, 57.8 metric tons of PCB-contaminated waste was disposed. Changes in EPCRA Section 313 regulations, regarding persistent bio-accumulative toxics, have added impetus to this removal.

SF_6 breakers have replaced oil-filled circuit breakers at several sites. The oil and metal from these replacements have been recycled as regulations allow. Quantities of hazardous waste and

recycled and reused waste was collected and reported in Western's 2004 Annual Report on Waste Generation and Pollution Prevention Progress (Appendix K).

EO 13101, Greening the Government through Waste Prevention, Recycling and Federal Acquisition, requires Federal agencies to purchase products listed by the EPA that contain post consumer recycled content materials. These affirmative procurement categories include paper products, construction materials and non-paper office supplies.

An annual report is submitted to DOE for all listed non-GSA purchased products. GSA reports Western's purchases directly. A summary report is included in Appendix K. In 2004, Western reported $371,249 in purchases of products containing recovered material content.

6.6 Environmental Risk Assessment and Management

Western completed evaluation of all environmental program elements during the EMS self-assessment process. Part of each self-assessment included an analysis of risk and liability for each recommendation identified. Western continues to include these recommendations in the EMS documentation.

6.7 Renewable Energy Purchasing - Western's Green Tag Program

In a speech to the United States Energy Association on June 12, 2002, Secretary of Energy Spencer Abraham directed Western to institute a Green Tags program. The Green Tags program is a renewable resource marketing program that enables customers to either purchase renewable energy or purchase the environment attributes of renewable energy generation. Western's program includes three parts: 1) acquire renewable resources for Federal agencies upon request; 2) acquire renewable energy to supplement Western's firm power deliveries, upon request and as allowed in applicable marketing plans; and 3) facilitate development of renewable energy sources by Western's customers.

In 2002 Western began developing and implementing its program that now encompasses two independent program efforts. The first two parts of the proposal are now referred to as: Renewable Resources for Federal Agencies; the third part of the proposal is referred to as Consumer-Owned Utility Tradable Renewable Certificate (TRC) Initiative (COTI).

Under the Renewable Resources for Federal Agencies Program effort, Western is working collaboratively with the Federal Energy Management Program (FEMP) in offering renewable resources opportunities to Federal agencies. Two renewable resource options are offered. They are: renewable energy certificates (RECs) and renewable energy.

Presently, Western and FEMP have performed marketing and outreach activities to help Federal agencies understand these opportunities and to make decisions regarding their interest. To date, Western has issued two requests for proposals for RECs. The first was for 17,000 MWH to supply RECs to EPA offices in Kansas City, Denver, and San Francisco. The second was for 115,000 MWH to supply RECs to multiple agencies, including Western, Ft. Carson, Colorado and DOE facilities at Los Alomos, Sandia, Pantex and Lawrence Berkley Labs. Western and FEMP continue to market the program to Federal agencies, including the Department of Defense, and expect to issue more requests for proposals to acquire renewable resources in the future. All costs associated with renewable resource purchases are passed on to the Federal agencies participating in the program.

Under the COTI effort, Western established a consumer-owned utility working group that included representatives from the National Rural Electric Cooperative Association (NRECA), the American Public Power Association (APPA), the Bonneville Power Administration, and several consumer-owned utilities across the United States. The goal of the program is to develop a consumer-owned utility TRC Certification, Trading, Tracking and Marketing approach in which all of the nation's 3000 consumer-owned utilities can participate and benefit. Western believes this program will encourage a national market for wholesale TRCs from consumer-owned power sources to be developed.

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LIST OF APPENDICES

Note: Where appendices are extracted from other documents, the page numbers retain their original numbering sequence and not the appendix numbering of this document.

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APPENDIX A

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANS AND CERCLA TIER II REPORTS

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SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANS AND EPCRA TIER II REPORTINGOF THE WESTERN AREA POWER ADMINISTRATION CALENDAR YEAR 2004

Facility Name	County	Tier II	SPCC	Revised 2004?	New SPCC
Arizona					
Davis Dam Substation	Mohave		Yes		
Glenn Canyon Substation	Coconino		Yes		
Liberty Substation	Maricopa	Yes			
Parker Dam Substation	La Paz		Yes		
Phoenix Operations and Maintenance Facility	Maricopa	Yes			
Pinnacle Peak Substation	Maricopa	Yes			
Spook Hill Substation	Maricopa		Yes		
California[1]					
Airport Substation	Shasta		Yes		
Contra Costa # 1 Substation	Contra Costa		Yes		
Contra Costa # 4 Substation	Contra Costa		Yes		
Corning Substation	Tehama		Yes		
Elverta Maintenance Facility	Sacramento		Yes		
Elverta Substation	Sacramento		Yes		
Folsom Substation	Sacramento		Yes		
Keswick Substation	Shasta		Yes		
Pleasant Valley Substation	Fresno		Yes		
Redding Maintenance Facility	Shasta		Yes		
Roseville Substation	Placer		Yes		
San Luis Gianelli Pumping Plant	Merced		Yes		
Shasta Substation	Shasta		Yes		
Tracy Substation & Maintenance Facility	Alameda		Yes		
Wintu Substation	Shasta		Yes		
Colorado					
Ault Substation	Weld	Yes			
Bears Ears Substation	Moffat	Yes			
Blue Mesa Substation	Gunnison	Yes	Yes	Yes	
Brighton Substation	Weld	Yes			
Brush Maintenance Office and Beaver Creek Substation	Morgan	Yes			
Brush Substation	Morgan	Yes			
Craft Training Center	Montrose	Yes	Yes	Yes	
Curecanti Substation	Montrose	Yes	Yes	Yes	
Derby Hill Substation	Larimer	Yes			
Dove Creek Pumping Plant Substation	Dolores	Yes			
Estes Substation	Larimer	Yes	Yes		
Flatiron Substation	Larimer	Yes	Yes		

[1] SPCC Plans are included in Business Plans required by the State of California.

Facility Name	County	Tier II	SPCC	Revised 2004?	New SPCC
Fleming Substation	Logan	Yes	Yes		
Fort Morgan West Substation	Morgan	Yes			
Frenchman Creek Substation	Phillips	Yes	Yes		
Granby (Farr) Pumping Plant Switchyard	Grand	Yes	Yes		
Granby Substation	Grand	Yes			
Great Cut Pumping Plant Substation	Montezuma	Yes	Yes	Yes	
Haxtun Substation	Phillips	Yes			
Hayden Substation	Routt	Yes			
Holyoke Substation	Phillips	Yes			
Hoyt Substation	Morgan	Yes			
Hygiene Substation	Boulder	Yes			
Julesburg Substation	Sedgwick	Yes			
Kiowa Creek Substation	Morgan	Yes			
Kremmling Substation	Grand	Yes			
Limon Substation	Lincoln	Yes			
Midway Substation	El Paso	Yes			
Montrose Craft Training Center	Montrose	Yes	Yes		
Montrose Maintenance Office	Montrose	Yes	Yes		
Nunn Substation	Weld	Yes			
Pole Hill Substation	Larimer	Yes	Yes		
Poncha Springs Substation	Chaffee	Yes	Yes	Yes	
Poudre Substation	Larimer	Yes	Yes	Yes	
Prospect Valley Substation	Weld	Yes			
Rifle Substation	Garfield	Yes	Yes	Yes	
Rocky Mountain Region Power Marketing and Control Center	Larimer	Yes	Yes		
Salida Substation	Chaffee	Yes			
Sheeps Knob Microwave Site	Montrose	Yes			
Sterling Substation	Logan	Yes	Yes	Yes	
Wauneta Substation	Yuma	Yes			
Weld Substation	Weld	Yes	Yes	Yes	
Wiggins Substation	Morgan	Yes			
Willow Creek Pumping Plant Switchyard	Grand	Yes	Yes		
Woodrow Substation	Washington	Yes			
Wray Substation	Yuma	Yes			
Yuma Substation	Yuma	Yes			
Iowa					
Dennison Substation	Crawford	Yes	Yes		
Sioux City (230 kV yard) Substation	Plymouth	Yes	Yes		
Sioux City (345 kV yard) Substation	Plymouth	Yes	Yes		
Spencer Substation	Clay	Yes	Yes		
Minnesota					
Granite Falls Substation	Chippewa	Yes	Yes		
Morris Substation	Stevens	Yes	Yes		

Facility Name	County	Tier II	SPCC	Revised 2004?	New SPCC
Montana					
Bole Substation	Teton	Yes	Yes		
Circle Substation	McCone	Yes	Yes		
Conrad Substation	Ponder	Yes	Yes		
Crossover Substation	Big Horn	Yes	Yes		
Custer Substation	Yellowstone	Yes	Yes		
Dawson County Substation	Dawson	Yes	Yes		
Fallon Pump	Prairie		Yes		
Fallon Relift	Prairie		Yes		
Frazer Substation	Valley		Yes		
Glendive Substation	Dawson	Yes	Yes	Yes	
Glendive Pump 1	Prairie	Yes	Yes		
Glendive Pump 2	Prairie		Yes		
Havre Substation	Hill	Yes	Yes		
Miles City 1 Substation	Custer	Yes	Yes		
Miles City 2 Substation	Custer	Yes	Yes		
Miles City 4 Substation (Miles City Converter)	Custer	Yes	Yes		
O'Fallon Creek Substation	Prairie	Yes	Yes		
Rainbow Substation	Cascade	Yes	Yes		
Richland Substation	Richland	Yes	Yes		
Rudyard Substation	Hill	Yes	Yes		
Savage Substation	Richland		Yes		
Savage Pump	Richland		Yes		
Shelby Substation	Toole	Yes	Yes		
Shelby Substation #2	Toole	Yes	Yes		
Shirley Substation	Custer	Yes	Yes		
Terry Pump	Prairie		Yes	Yes	
Terry Tap	Prairie		Yes		
Tiber Dam Substation	Liberty	Yes	Yes	Yes	Yes
Valley Pump Substation	Valley		Yes	Yes	
Whately Substation	Valley	Yes	Yes		
Wolf Point Substation	Roosevelt	Yes	Yes		
Yellowtail Substation	Big Horn	Yes	Yes		
Nebraska					
Alliance Substation	Box Butte	Yes			
Bridgeport Substation	Morrill	Yes	Yes	Yes	
Chadron Substation	Dawes	Yes			
Chappell Substation	Deuel	Yes			
Dunlap Substation	Dawes	Yes			
Gering Substation and Maintenance Facility	Scotts Bluff	Yes	Yes	Yes	
Kimball Substation	Kimball	Yes			
Ogallala Substation	Keith	Yes			
Sidney Substation	Cheyenne	Yes			

Facility Name	County	Tier II	SPCC	Revised 2004?	New SPCC
Stegall Substation	Scotts Bluff	Yes			
Virginia Smith Converter Station	Cheyenne	Yes			
New Mexico					
Shiprock Substation	San Juan	Yes			
Waterflow Substation	San Juan	Yes	Yes	Yes	
Nevada					
Amargosa Substation	Clark		Yes		
Mead Substation	Clark	Yes			
North Dakota					
Belfield Substation	Stark	Yes	Yes	Yes	
Bisbee Substation	Towner	Yes	Yes		
Bismarck Substation	Burleigh	Yes	Yes		
Buford-Trenton Substation	Williams	Yes	Yes	Yes	
Carrington Substation	Foster	Yes	Yes		
Custer Trail Substation	Morton	Yes	Yes		
DeVaul Substation	Grant	Yes	Yes		
Devil's Lake Substation	Ramsey	Yes	Yes		
Edgeley Substation	LaMoure	Yes	Yes		
Fargo Substation	Cass	Yes	Yes		
Foreman Substation	Sargent	Yes	Yes		
Killdeer Substation	Dunn	Yes	Yes		
Jamestown Substation	Stutsman	Yes	Yes		
Lakota Substation	Nelson	Yes	Yes		
Leeds Substation	Benson	Yes	Yes		
Rolla Substation	Rolette	Yes	Yes		
Rugby Substation	Pierce	Yes	Yes		
Snake Creek Substation	McLean	Yes	Yes		
Valley City Substation	Barnes	Yes	Yes		
Washburn Substation	McLean	Yes	Yes		
Watford Substation	McKenzie	Yes	Yes		
Williston Substation	Williams	Yes	Yes		
South Dakota					
Armour Substation	Charles-Mix	Yes	Yes		
Beresford Substation	Union	Yes	Yes		
Bonesteel Substation	Gregory	Yes	Yes		
Brookings Substation	Brookings	Yes	Yes		
Creston Substation	Union	Yes	Yes		
Eagle Butte Substation	Ziebach	Yes	Yes		
Ellsworth Air Force Base Substation	Rapid City	Yes	Yes		
Faith Substation	Meade	Yes	Yes		
Flandreau Substation	Moody	Yes	Yes		
Fort Thompson Substation	Buffalo	Yes	Yes		
Gregory Substation	Gregory	Yes	Yes		
Groton Substation	Brown	Yes	Yes		
Huron Substation	Beadle	Yes	Yes		

Facility Name	County	Tier II	SPCC	Revised 2004?	New SPCC
Irv Simmons Substation	Stanley		Yes		
Martin Substation	Bennett	Yes	Yes		
Maurine Substation	Meade	Yes	Yes		
Midland Substation	Haakon	Yes	Yes		
Mission Substation	Todd	Yes	Yes		
Mount Vernon Substation	Davison	Yes	Yes		
Newell Substation	Meade	Yes	Yes		
New Underwood Substation	Pennington	Yes	Yes		
Philip Substation	Haakon	Yes	Yes		
Pierre Substation	Hughes	Yes	Yes		
Rapid City Substation	Pennington	Yes	Yes	Yes	
Sioux Falls Substation	Minnehaha	Yes	Yes		
Summit Substation	Roberts	Yes	Yes		
Tyndall Substation	Bon Homme	Yes	Yes		
Wall Substation	Pennington	Yes	Yes		
Watertown Maintenance Facility	Codington	Yes	Yes		
Watertown PCB Storage	Codington		Yes		
Watertown Substation	Codington	Yes	Yes		
Watertown Substation (Static Variance)	Codington		Yes		
White Substation	Brookings	Yes	Yes		
Wicksville Substation	Pennington	Yes	Yes		
Winner Substation	Tripp	Yes	Yes		
Witten Substation	Tripp	Yes	Yes		
Woonsocket Substation	Jerauld	Yes	Yes		
Yankton Substation	Yankton	Yes	Yes		
Utah					
Flaming Gorge Switchyard	Daggett	Yes	Yes	Yes	
Tyzack Substation	Uintah	Yes	Yes	Yes	
Vernal Substation	Uintah	Yes	Yes	Yes	
Wyoming					
Alcova Switchyard	Natrona	Yes	Yes		
Archer Substation	Laramie	Yes			
Badwater Substation	Fremont	Yes	Yes		
Basin Substation	Big Horn	Yes			
Big George Substation	Park	Yes			
Boysen Substation	Fremont	Yes			
Casper Field Office	Natrona	Yes			
Casper Mountain Microwave Site	Natrona	Yes			
Casper Substation	Natrona	Yes	Yes	Yes	
Cheyenne Substation	Laramie	Yes			
Copper Mountain Substation	Fremont	Yes	Yes	Yes	
Garland Substation	Park	Yes			
Glendale Substation	Park	Yes	Yes		
Glendo Substation	Platte	Yes	Yes	Yes	
Heart Mountain Substation	Park	Yes	Yes		

Facility Name	County	Tier II	SPCC	Revised 2004?	New SPCC
Lovell Substation	Big Horn	Yes			
Lingle Substation	Goshen	Yes	Yes		
Limestone Substation	Platte	Yes	Yes	Yes	
Lusk Rural Substation	Niobrara	Yes			
Lusk Substation	Niobrara	Yes	Yes		
Lyman Substation	Goshen	Yes			
McCullough peak Microwave Site	Park	Yes			
Medicine Bow Substation	Carbon	Yes			
Meeteetse Substation	Park	Yes			
Miracle Mile Substation	Carbon	Yes			
Muddy Ridge Substation	Fremont	Yes			
North Cody Substation	Park	Yes			
Pilot Butte Substation	Fremont	Yes	Yes		
Pinebluffs Substation	Laramie	Yes			
Raderville Substation	Natrona	Yes			
Ralston Substation	Park	Yes			
Spence Substation	Natrona	Yes			
Thermopolis Substation	Hot Springs	Yes			
Torrington Substation	Goshen	Yes			
Warren Air Force Substation	Laramie	Yes			
Whiterock Substation	Platte	Yes			
TOTAL		189	154	26	1

APPENDIX B

ANNUAL NEPA PLANNING SUMMARY

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Annual NEPA Planning Summary Status
Ongoing NEPA Compliance Activities: Environmental Assessments

Western Area Power Administration

January 24, 2005

*Title, Location	Estimated Cost	Estimated Schedule (**NEPA Milestones)		Description
Headgate Rock-Blythe No. 1, 161-kV Transmission Line Pole Replacement Blythe, CA DOE/EA-1427	$43,000.00	Determination Date: Transmittal to State: EA Approval: FONSI:	3/7/2002 April-05 August-05 August-05	The purpose of the pole replacement project is to extend the life of the Headgate Rock-Blythe 161-kV transmission line by replacing the transmission line support structures in order to allow continued electrical transmission to customers in California and Arizona.
Harry Allen-Mead 500-kV Transmission Line, NV DOE/EA-1470	Applicant Funded	Determination Date: Transmittal to State: EA Approval: FONSI:	1/22/2003 3/4/2004 10/28/2004 10/28/2004	Western is cooperating agency on this EA. Nevada Power Company (Nevada Power) has applied to Western to interconnect the proposed Harry Allen-Mead 500-kilovolt (kV) Transmission Line Project at Mead Substation and to build a portion of the transmission line across Western-managed lands west of Mead Substation.
Parker-Gila 161-kV Transmission Line Relocation, Arizona DOE/EA-1487	$63,000.00	Determination Date: Transmittal to State: EA Approval: FONSI:	11/20/2003 12/23/2004 March-05 March-05	Western owns, operates, and maintains the Parker-Gila 161-kV Transmission Line. Western proposes to reroute this portion of the transmission line to enhance public health and safety, improve electrical service reliability, and prevent future ROW encroachements in this area.
Beaver Creek-Hoyt-Wiggins Transmission Line Rebuild, Morgan and Weld Counties, CO	$725,000	Determination Date: Transmittal to State: EA Approval: FONSI:	8/17/2004 April-05 July-05 July-05	Western proposes to rebuild and upgrade the Beaver Creek to Hoyt 115-kv transmission line to a double-circuit 230 kV line; the Hoyt to Erie 115-kV line to a 230-kV double circuit line and the Hoyt-Wiggins 115-KV line. Approximately 91 miles of line are involved. The lines are in Weld and Morgan Counties, Colorado.
Granby Pumping Plant-Windy Gap Transmission Line Rebuild Project, Grand County, Colorado DOE/EA-1520	$200,000 (environmental contract not awarded yet)	Determination Date: Transmittal to State: EA Approval: FONSI:	12/10/2004 October-05 January-06 January-05	Western proposes to rebuild and upgrade the Granby Pumping Plant-Windy Gap 60-kV transmission line, between the Windy Gap Substation and the Granby Pumping Plant, a distance of 11.7 miles. The project is located in Grand County, Coloradol.
Cheyenne-Miracle Mile and Ault-Cheyenne Transmission Line Rebuild Project, WY DOE/EA-1456	$1,000,000	Determination Date: Transmittal to State: EA Approval: FONSI:	9/30/2002 3/31/2005 4/31/2005 4/31/2005	Western proposes to rebuild the Cheyenne-Miracle Mile and Ault-Cheyenne 115-kV transmission lines, and construct a new substation at Laramie, Wyoming. The project is located in Carbon, Albany and Laramie counties, Wyoming and Weld County, Colorado.
Peetz Table Wind Project, Peetz, Colorado	Applicant Funded	Determination Date: Transmittal to State: EA Approval: FONSI:	12/16/2004 2/1/2005 3/31/2005 3/31/2005	Invenergy Wind Power, LLC has applied to Western to interconnect a proposed 129-MW wind power facility to Western's 230-kV North Yuma-Sidney transmission line. The estimated average annual output would be 49MW. The project is located in Peetz, Colorado.
Sacramento Valley Right-of-Way Maintenance, Sacramento Valley, CA DOE/EA-1395	1,200,000	Determination Date: Transmittal to State: EA Approval: FONSI:	1/18/2001 5/24/2002	Western is preparing an Environmental Assessment in response to proposed changes in operation and maintenance procedures along Western's Sacramento Valley transmission line right of way.

Annual NEPA Planning Summary Status
Ongoing NEPA Compliance Activities: Environmental Assessments

Western Area Power Administration

January 24, 2005

*Title, Location	Estimated Cost	Estimated Schedule (**NEPA Milestones)		Description
East Altamont Energy Center, CA **DOE/EA-1411**	Applicant Funded	Determination Date: Transmittal to State: EA Approval: FONSI:	9/20/2001 12/6/2001 9/19/2002 6/2/2004	East Altamont Energy Center, LLC applied to Western to interconnect a proposed 1100 MW combined-cycle combustion generation facility with Western's Tracy Substation near Tracy, California.
Charlie Creek-Williston Fiber Optic Overgead Ground Wire Installation, ND **DOE/EA-1389**	$120,000	Determination Date: Transmittal to State: EA Approval: FONSI:	3/20/2001 4/7/2004 August-05 August-05	Western is preparing an EA to address its proposal to replace transmission structures and install optical overhead ground wire between Charlie Creek and Williston substations in North Dakota. The structures need to be replaced due to deterioration and the need for additional clearance for the ground wires.
Havre-Rainbow Transmission Line Rebuild Montana **DOE/EA-1424**	$350,000	Determination Date: Transmittal to State: EA Approval: FONSI:	12/12/2001 July-05 September-05 September-05	Western is preparing an EA to address its proposal to replace transmission structures and install optical overhead ground wire between Havre and Rainbow substations in Montana. Portions of the transmission line would be rerouted to reduce land use conflicts.

Annual NEPA Planning Summary Environmental Assessments Expected to be Prepared in the Next 12 Months

Western Area Power Administration

January 24, 2005

*Title, Location	Estimated Cost	Estimated Schedule (**NEPA Milestones)		Description
North Valley Right-of-Way Maintenance, Sacramento Valley, CA	$1,200,000	Determination Date:	January-05	Western is preparing an Environmental Assessment in response to proposed changes in operation and maintenance procedures along Western's North Area transmission right-of-way (ROW) in California. Western proposes to change the current vegetation maintenance procedures to include the expanded use of herbicides in combination with manual and mechanical removal methods in an effort
		Transmittal to State:	January-06	
		EA Approval:	June-06	
		FONSI:	June-06	
Trinity PUD Direct Interconnect EA	$200,000	Determination Date:	Pending	Western is preparing an Environmental Assessment to analyze a proposed transmission line in Trinity County, California to improve electric reliability in the area.
		Transmittal to State:	May-05	
		EA Approval:	June-05	
		FONSI:	June-05	
East Side Peaking Project	Applicant Funded	Determination Date:	February-05	Western is a cooperating agency with Rural Utilities Service for a less that 50-megawatt peaking plant in Groton, South Dakota.
		Transmittal to State:	March-05	
		EA Approval:	May-05	
		FONSI:	May-05	
Buffalo Ridge-White 115-kV Transmission Line Interconnection	Applicant Funded	Determination Date:	January-05	Xcel Energy proposes to construct a new 115-kV transmission line and associated structures and electrical equipment to connect the Buffalo Ridge Substation in Lincoln County, Minnesota with Western's White Substation in Brookings County, South Dakota.
		Transmittal to State:	May-05	
		EA Approval:	November-05	
		FONSI:	November-05	
Valley County Wind Energy Project	Applicant Funded	Determination Date:	February-05	Wind Hunter, LLC proposes to construct a 400-MW wind farm in northern Montana and interconnect with Western's transmission system. Bureau of Land Management would be the lead agency. Western would be a cooperating agency and adopt BLM's Programmatic Wind EIS to support a tiered EA process.
		Transmittal to State:	July-05	
		EA Approval:	October-05	
		FONSI:	October-05	
Blythe Energy Project Phase II	Applicant Funded	Determination Date:	February-05	Caithness Energy proposes to construct a 520-MW combined-cycle natural gas fueled power plant adjacent to the existing Blythe Energy Project in Blythe, California and interconnect with Western's transmission system. Western and the California Energy Commission will conduct a joint environmental review process.
		Transmittal to State:	March-05	
		EA Approval:	December-05	
		FONSI:	December-05	

Annual NEPA Planning Summary Status of Ongoing NEPA Compliance Activities: Environmental Impact Statements

Western Area Power Administration

Januray 24, 2005

*Title, Location	Estimated Cost	Estimated Schedule (**NEPA Milestones)		Description
Operation of Flaming Gorge Dam, Colorado River Storage Project, Colorado River, UT	N/A	Determination Date:	6/6/2000	Western is a cooperating agency with the Bureau of Reclamation for the Upper Colorado River Endangered Fish Recovery Program
		NOI:	6/6/2000	
DOE/EIS-0351		Scoping:	7/11-19/2000	
		Draft	8/29/2004	
		Hearings	12,13,19-21/2004	
		Final		
		ROD		
Caithness Big Sandy Project, Wikieup, AZ	Applicant Funde	Determination Date:	3/3/2000	Project is on hold at the request of the applicant.
		NOI:	4/18/2000	
DOE/EIS-0315		Scoping:	5/3/2000	
		Draft	6/22/2001	
		Hearings	7/24/2001	
		Final		
		ROD		
SEIS on Caithness Big Sandy Project	Applicant Funde	Supplemental Analys	5/29/2002	
		Determination Date:	12/28/2001	
DOE/EIS-1315-S1		Approval:		
Welton-Mohawk 520 MW Generating Facility, AZ	Applicant Funde	Determination Date:	4/2/2003	Welton-Mohawk 520 MW Generating Facility located in Wellton Arizona. Western is the lead Agency under NEPA and BLM and Bureau of Reclamation will be cooperating Agencies.
		NOI:	5/19/2003	
DOE/EIS-0358		Scoping:	6/3-4/2003	
		Draft	3/25/2005	
		Hearings	April-05	
		Final	September-05	
		ROD	November-05	

Annual NEPA Planning Summary Status of Ongoing NEPA Compliance Activities: Environmental Impact Statements

Western Area Power Administration

Januray 24, 2005

*Title, Location	Estimated Cost	Estimated Schedule (**NEPA Milestones)		Description
Platte River Cooperative Agreement PEIS, NE, WY, CO	N/A	Determination Date:	2/5/1998	Western is a cooperating agency with the Fish and Wildlife Service for the Platte River Cooperative Agreement Programmatic EIS.
		NOI:	2/10/1998	
DOE-EIS-0295		Scoping:	25/1998-4/7/1998	
		Draft	1/26/2004	
		Hearings	6/2004-8/10/2004	
		Final		
		ROD	December-05	
Windy Gap Firming Project, CO	N/A	Determination Date:	7/1/2003	Western is a cooperating agency with the Bureau of Reclamation for the Windy Gap Firming Project, Colorado. The EIS will address options for rerouting a transmission line that would be affected by the project.
DOE/EIS-0370		NOI:	9/8/2003	
		Scoping:	0/2003-10/2/2003	
		Draft	June-05	
		Hearings		
		Final		
		ROD		
Sacramento Voltage Support, CA	1,200,000 (estimated final	Determination Date:	8/8/2000	Western proposes transmission system additions and improvements to resolve voltage support problems occuring on the transmission system in Sacramento area of California.
DOE/EIS-0323		NOI:	8/8/2000	
		Scoping:	9/12-21/2001; 3/22/2001;	
		Draft	11/15/2002	
		Hearings	12/9-12/2002	
		Final	9/19/2003	
		ROD	1/12/2004	

Annual NEPA Planning Summary Environmental Impact Statements Expected to be Prepared in the Next 24 Months

Western Area Power Administration

January 24, 2005

*Title, Location	Estimated Cost	Estimated Schedule		Description
Big Stone II Power Plant Addition	Applicant Funded	Determination Date:	February-05	Addition of a 600-megawatt, coal-based generating unit at Big Stone Generating Plant near Milbank, South Dakota. Western would be lead Federal agency.
		NOI:	May-05	
		Scoping:	May-05	
		Draft	February-06	
		Hearings	March-06	
		Final	August-06	
		ROD	November-06	
Navitas Wind Farm	Applicant Funded	Determination Date:	January-05	Development of a 400-MW wind farm near White, South Dakota. Western would be the lead Federal agency.
		NOI:	February-05	
		Scoping:	February-05	
		Draft	August-05	
		Hearings	September-05	
		Final	January-06	
		ROD	February-06	
Dolan Springs Wind Farm	Applicant Funded	Determination Date:	June-05	Development of a 400-MW wind farm near Dolan Springs, Arizona. Western would be a cooperating agency and the Bureau of Land Management would the be lead Federal agency. Western plans to adopt the BLM Programmatic Wind EIS to support its review.
		NOI:	July-05	
		Scoping:	August-05	
		Draft	January-06	
		Hearings	February-06	
		Final	July-06	
		ROD	September-06	

APPENDIX C

STANDARD MITIGATIVE MEASURES FOR CONSTRUCTION, OPERATION, AND MAINTENANCE OF WESTERN FACILITIES

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WESTERN AREA POWER ADMINISTRATION
STANDARD MITIGATIVE PRACTICES

Mitigation Measures:

1. The contractor shall limit the movement of its crews and equipment to the right-of-way (ROW), including access routes. The contractor shall limit movement on the ROW so as to minimize damage to grazing land, crops, or property, and shall avoid marring the land.

2. When weather and ground conditions permit, the contractor shall obliterate all contractor-caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded, or otherwise eliminated in an approved manner. In hay meadows, alfalfa fields, pastures, and cultivated productive lands, ruts, scars, and compacted soils shall have the soil loosened and leveled by scarifying, harrowing, discing, or other approved methods. Damage to ditches, tile drains, terraces, roads, and other features of the land shall be corrected. Before final acceptance of the work in these agricultural areas, all ruts shall be obliterated, and all trails and areas that are hard-packed as a result of contractor operations shall be loosened, leveled, and reseeded. The land and facilities shall be restored as nearly as practicable to their original conditions.

3. Water bars or small terraces shall be constructed across all ROW and access roads on hillsides to prevent water erosion and to facilitate natural revegetation.

4. The contractor shall comply with all Federal, State, and local environmental laws, orders, and regulations. Prior to construction, all supervisory construction personnel and heavy equipment operators will be instructed on the protection of cultural and ecological resources.

5. The contractor shall exercise care to preserve the natural landscape and shall conduct its construction operations so as to prevent any unnecessary destruction, scarring, or

defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment. The edges of clearings and cuts through tree, shrubbery, or other vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Where such clearing occurs in the Lake Mead National Recreation Area, the contractor shall consult with the on-site Park Representative.

6. On completion of the work, all work areas except access roads shall be scarified or left in a condition which will facilitate natural revegetation, provide for proper drainage, and prevent erosion. All destruction, scarring, damage, or defacing of the landscape resulting from the contractor's operations shall be repaired by the contractor.

7. Construction staging areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On abandonment, all storage and construction buildings, including concrete footings and slabs, and all construction materials and debris shall be removed from the site. The area shall be regraded as required so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.

8. Borrow pits shall be excavated so that water will not collect and stand therein. Before being abandoned, the sides of borrow pits shall be brought to stable slopes, with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area giving a natural appearance. Waste piles shall be shaped to provide a natural appearance.

9. Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter contaminants, debris, any other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and waste include, but are not restricted to refuse,

garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailing, mineral salts, and thermal pollution.

10. Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses, shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means.

11. Excavated material or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines, or other watercourse perimeters where they can be wasted away by high water or storm runoff or can in any way encroach upon the actual watercourse itself.

12. Waste waters from concrete batching, or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates, or other approved methods. Any such waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these specifications, settleable material as defined as that material which will settle from the water by gravity during a 1-hour quiescent detention period.

13. The contractor shall utilize such practicable methods and devices as are reasonably available to control, present, and otherwise minimize atmospheric emissions or discharges of air contaminants.

14. The emission of dust into the atmosphere will not be permitted during the manufacture, handling, and storage of concrete aggregate, and the contractor shall use such methods and equipment as necessary for the collection and disposal, or prevention, of dust during

these operations. The contractor's methods of storing and handling cement and pozzolans shall also include means of eliminating atmospheric discharges of dust.

15. Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or other inefficient operating conditions, shall not be operated until repairs or adjustments are made.

16. The contractor shall prevent any nuisance to persons or damage to crops, cultivated fields, and dwellings from dust originating from his operations. Oil and other petroleum derivatives shall not be used for dust control. Speed limits shall be enforced, based on road conditions, to reduce dust problems.

17. To avoid nuisance conditions due to construction noise, all internal combustion engines used in connection with construction activity shall be fitted with an approved muffler and spark arrester.

18. Burning or burying waste materials on the ROW or at the construction site will be permitted if allowed by local regulations. The contractor shall remove all other waste materials from the construction area. All materials resulting from the contractor's clearing operations shall be removed from the ROW.

19. The contractor shall make all necessary provisions in conformance with safety requirements for maintaining the flow of public traffic and shall conduct its construction operations to offer the least possible obstruction and inconvenience to public traffic.

20. Western will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW, to the mutual satisfaction to the parties involved.

21. Structures will be carefully located to avoid sensitive vegetative conditions, including wetlands, where practical.

22. ROW will be located to avoid sensitive vegetation conditions including wetlands where practical, or, if they are linear to cross them at the least sensitive feasible point.

23. Removal of vegetation will be minimized to avoid creating a swath along the ROW.

24. Topsoil will be removed, stockpiled, and respread at all heavily disturbed areas not needed for maintenance access.

25. All disturbed areas not needed for maintenance access will be reseeded using mixes approved by the landowner or land management agency.

26. Erosion control measures will be implemented on disturbed areas, including areas that must be used for maintenance operations (access ways and areas around structures).

27. The minimum area will be used for access ways (12 feet to 15 feet wide, except where roadless construction is used).

28. Structures will be located and designed to conform with the terrain. Leveling and benching of the structure sites will be the minimum necessary to allow structure assembly and erection.

29. ROW will be located to utilize the least steep terrain and, therefore, to disturb the smallest area feasible.

30. Careful structure location will ensure spanning of narrow flood prone areas.

31. Structures will not be sited on any potentially active faults.

32. Structure sites and other disturbed areas will be located at least 300 feet, where practical, from rivers, streams (including ephemeral streams), ponds, lakes, and reservoirs.

33. New access ways will be located at least 300 feet, where practical, from rivers, ponds, lakes, and reservoirs.

34. At crossings of perennial streams by new access ways, culverts of adequate size to accommodate the estimated peak flow of the stream will be installed. Construction areas will minimize disturbance of the stream banks and beds during construction. The mitigation measures listed for soil/vegetation resources will be performed on areas disturbed during culvert construction.

35. If the banks of ephemeral stream crossings are sufficiently high and steep that breaking them down for a crossing would cause excessive disturbance, culverts will be installed using the same measures as for culverts on perennial streams.

36. Blasting will not be allowed.

37. Power line structures will be located, where practical, to span small occurrences of sensitive land uses, such as cultivated areas. Where practicable, construction access ways will be located to avoid sensitive conditions.

38. ROW will be purchased at fair market value and payment will be made of full value for crop damages or other property damage during construction or maintenance.

39. The Power line will be designed to minimize noise and other effects from energized conductors.

40. The precise location of all structure sites, ROW, and other disturbed areas will be determined in cooperation with landowners or land management agencies.

41. Crossing of operating railroads by construction vehicles or equipment in a manner that would cause delays to railroad operations will be avoided. Construction will be coordinated with railroad operators. Conductors and overhead wire string operations would use guard structures to eliminate delays.

42. Before construction, Western will perform a Class III (100 percent of surface) cultural survey on all areas to be disturbed, including structure sites and new access ways. These surveys will be coordinated with the appropriate land owner or land management

agency. A product of the survey will be a Cultural Resources Report recording findings and suggesting mitigation measures. These findings will be reviewed with the State Historic Preservation Offices and other appropriate agencies, and specific mitigation measures necessary for each site or resource will be determined. Mitigation may include careful relocation of access ways, structure sites, and other disturbed areas to avoid cultural sites that should not be disturbed, or data recovery.

43. The contractor will be informed of the need to cease work in the location if cultural resource items are discovered.

44. Construction activities will be monitored or sites flagged to prevent inadvertent destruction of any cultural resource for which the agreed mitigation was avoidance.

45. Construction crews will be monitored to the extent possible to prevent vandalism or unauthorized removal or disturbance of cultural artifacts or materials from sites where the agreed mitigation was avoidance.

46. Should any cultural resources that were not discovered during the Class III Survey be encountered during construction, ground disturbance activities at that location will be suspended until the provisions of the National Historic Preservation Act and enabling legislation have been carried out.

47. Construction activities will be monitored or significant locations flagged to prevent inadvertent destruction of any paleontological resource for which the agreed mitigation was avoidance.

48. Clearing for the access road will be limited to only those trees necessary to permit the passage of equipment.

49. The access road will follow the lay of the land rather than a straight line along the ROW where steep features would result in a higher disturbance.

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APPENDIX D

ENVIRONMENTAL CONSTRUCTION STANDARDS

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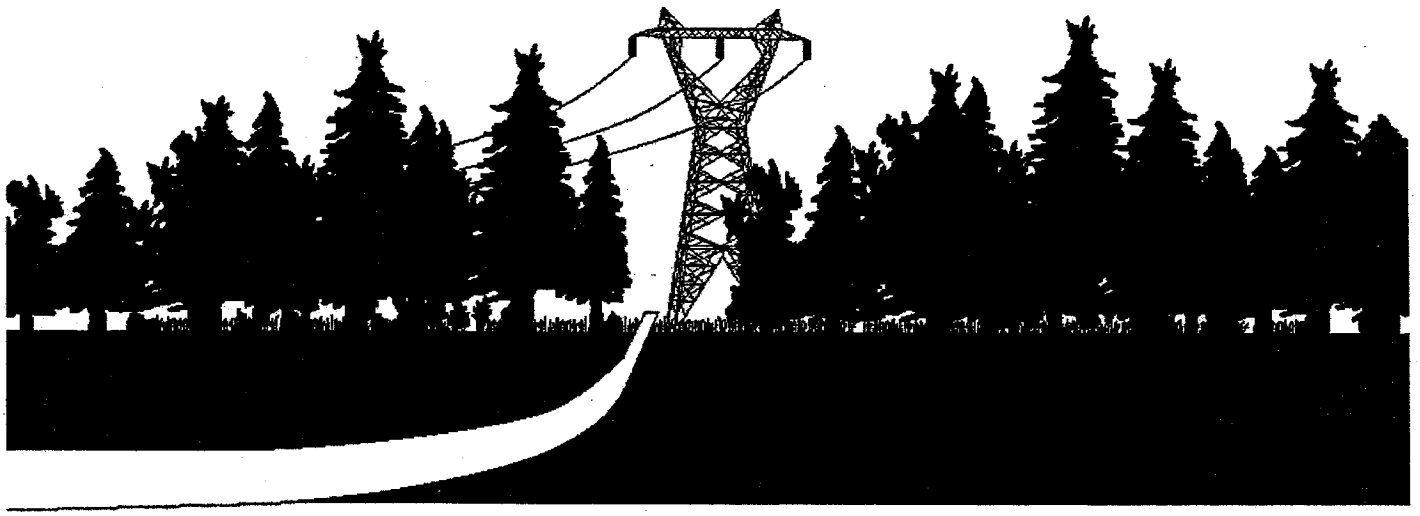
Western
AREA POWER
ADMINISTRATION

CONSTRUCTION STANDARDS

STANDARD 13

ENVIRONMENTAL QUALITY PROTECTION



June 2003

SAFETY
A HABIT TO LIVE BY

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

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STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

SECTION 13.1–CONTRACTOR FURNISHED DATA

1. RECYCLED MATERIAL QUANTITY REPORT: Submit quantities for recycled material listed in Section 13.6, "Recycled Material Quantities", to the COR after completion and prior to submittal of final invoice.

2. PRODUCTS CONTAINING RECOVERED MATERIAL REPORT: Provide the COR the following information for purchases of items listed in Section 13.7, "Use of Products Containing Recovered Material":

   (1) Quantity and cost of listed items with recovered material content and quantity and cost of listed items without recovered material content after completion and prior to submittal of final invoice.

   (2) Written justification 7 days prior to purchase of listed items if recovered material content products are not available: 1) competitively within a reasonable time frame; 2) that meet performance criteria defined in the Standards or Project Specifications; or 3) at a reasonable price.

3. RECLAIMED REFRIGERANT RECEIPT: A receipt from the reclaimer stating that the refrigerant was reclaimed, the amount and type of refrigerant, and the date shall be submitted to the COR after completion and prior to submittal of final invoice in accordance with Section 13.8.5, "Refrigerants And Receipts".

4. WASTE MATERIAL QUANTITY REPORT: Submit quantities of total project waste material disposal as listed below to the COR after completion and prior to submittal of final invoice in accordance with Section 13.8.8, "Waste Material Quantity Report".

   (1) Sanitary Wastes: Volume in cubic yards or weight in pounds.

   (2) Hazardous or Universal Wastes: Weight in pounds.

   (3) PCB Wastes: Weight in pounds.

   (4) Other regulated wastes (e.g., lead-based paint or asbestos): Weight in pounds (specify type of waste in report).

5. SPILL PREVENTION NOTIFICATION AND CLEANUP PLAN (Plan): Submit the Plan as described in Section 13.10.2, "Spill Prevention Notification and Cleanup Plan", to the COR for approval 14 days prior to start of work. Approval of the Plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

6. TANKER OIL SPILL PREVENTION AND RESPONSE PLAN: Submit the Plan as described in Section 13.10.3, "Tanker Oil Spill Prevention and Response Plan", to the COR for approval 14 days prior to start of work. Approval of the Plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

7. PESTICIDE USE PLAN: Submit one copy of a pesticide use plan as described in Section 13.11.3, "Pesticide Use Plan", to the COR for approval 14 days prior to use. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. Within seven days

after application, submit a written report in accordance with Standard 2 – Sitework, Section 2.1.1.5, "Soil-Applied Herbicide".

8. TREATED WOOD POLE AND MEMBERS RECYCLING CONSUMER INFORMATION RECEIPT: Submit treated wood pole and members consumer receipt forms to the COR after completion and prior to submittal of final invoice (see 13.12, "Treated Wood Poles and Members Recycling or Disposal").

9. PREVENTION OF AIR POLLUTION: Submit a copy of permits, if required, from Federal, State, or local agencies to the COR 14 days prior to the start of work.

10. ASBESTOS LICENSES OR CERTIFICATIONS: Submit a copy of licenses and/or certifications for asbestos work as described in 13.14, "Handling and Management of Asbestos Containing Material" paragraph a., to the COR prior to work. Submit copies of certificates of disposal and/or receipts for waste to the COR after completion and prior to submittal of final invoice.

11. LEAD PAINT NOTICES: Submit a copy of lead paint notices as described in 13.15, "Material with Lead-based Paint" paragraph b., to the COR upon completion and prior to submittal of final invoice. Submit copies of certificates of disposal and/or receipts for waste to the COR after completion and prior to submittal of final invoice.

12. WATER POLLUTION PERMITS: Submit copies of any water pollution permits as described in 13.16, "Prevention of Water Pollution" paragraph b., to the COR prior to work.

13. PCB TEST REPORT: Submit a PCB test report as described in 13.17, "Testing, Draining, Removal, and Disposal of Oil-filled Electrical Equipment" paragraph b., prior to draining, removal, or disposal of oil or oil-filled equipment that is designated for disposal.

14. OIL AND OIL-FILLED ELECTRICAL EQUIPMENT RECEIPT: Obtain and submit a receipt for oil and oil-filled equipment transported and disposed, recycled, or reprocessed as described in 13.17, "Testing, Draining, Removal, and Disposal of Oil-filled Electrical Equipment", to the COR upon completion and prior to submittal of final invoice.

15. OSHA PCB TRAINING RECORDS: Submit employee training documentation records to the COR 14 days prior to the start of work as described in 13.18.1.

16. CLEANUP WORK MANAGEMENT PLAN: Submit a Cleanup Work Management Plan as described in 13.18, "Removal of Oil-contaminated Material" paragraph b., to the COR for approval 14 days prior to the start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

17. POST CLEANUP REPORT: Submit a Post-Cleanup Report as described in 13.18, "Removal of Oil-contaminated Material" paragraph g., to the COR upon completion and prior to submittal of final invoice.

SECTION 13.2--ENVIRONMENTAL REQUIREMENTS

Comply with Federal, State, and local environmental laws and regulations. The sections in this Standard further specify the requirements.

SECTION 13.3--LANDSCAPE PRESERVATION

1. GENERAL: Preserve landscape features in accordance with the contract clause titled "Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements."

2. CONSTRUCTION ROADS: Location, alignment, and grade of construction roads shall be subject to the COR's approval. When no longer required, construction roads shall be restored to their original condition. Surfaces of construction roads shall be scarified to facilitate natural revegetation, provide for proper drainage, and prevent erosion. If revegetation is required, then use regionally native plants.

3. CONSTRUCTION FACILITIES: Shop, office, and yard areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent and prevent impact on sensitive riparian areas and flood plains. Storage and construction buildings, including concrete footings and slabs, shall be removed from the site prior to contract completion. The area shall be regraded as required so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion. If revegetation is required, then use regionally native plants.

SECTION 13.4--PRESERVATION OF CULTURAL AND PALEONTOLOGICAL RESOURCES

1. GENERAL: Do not remove or alter cultural artifacts or paleontological resources (fossils). Cultural artifacts are of potential scientific or cultural importance and include bones, tools, historic buildings, and features. Paleontological resources can be of scientific importance and include mineralized animals and plants or trace fossils such as footprints. Both cultural and paleontological resources are protected by Federal Regulations during Federal construction projects.

2. KNOWN CULTURAL OR PALEONTOLOGICAL SITES: Following issuance of notice to proceed, Western will provide two sets of plan and profile drawings showing sensitive areas located on or immediately adjacent to the transmission line right-of-way and/or facility. These areas shall be considered avoidance areas. Prior to any construction activity, the avoidance areas shall be marked on the ground in a manner approved by the COR. Instruct employees, subcontractors, and others that vehicular or equipment access to these areas is prohibited. If access is absolutely necessary, first obtain approval from the COR. Ground markings shall be maintained throughout the duration of the contract. Western will remove the markings during or following final cleanup. For some project work, Western will require an archaeological, paleontological or tribal monitor at or near cultural or paleontological site locations. The contractor will work with the monitor to identify avoidance areas.

3. UNKNOWN CULTURAL OR PALEONTOLOGICAL SITES: On rare occasions cultural or paleontological sites may be discovered during excavation or other earth-moving activities.

   (1) Reporting: If evidence of a cultural or paleontological site is discovered, immediately notify the COR and give the location and nature of the findings. Stop all activities within a 50-foot radius of the discovery and do not proceed with work within that radius until directed to do so by the COR.

   (2) Care of Evidence: Do not damage artifacts or fossils uncovered during construction.

4. CONTRACT ADJUSTMENTS: Where appropriate by reason of delays caused by a discovery, the Contracting Officer may make adjustments to contract requirements.

SECTION 13.5--NOXIOUS WEED CONTROL

1. GENERAL: Comply with Federal, state, and local noxious weed control regulations. Provide a "clean vehicle policy" while entering and leaving construction areas to prevent transport of noxious weed plants and/or seed. Transport only construction vehicles that are free of mud and vegetation debris to staging areas and the project right-of-way.

SECTION 13.6--RECYCLED MATERIAL QUANTITIES

1. GENERAL: Record quantities of the following material by category that is salvaged, recycled, reused, or reprocessed:

   (1) Transformers, Breakers: Weight without oil.

   (2) Electrical Conductors: Length in feet and Type (for example, ACSR, Copper, and gauge).

   (3) Structural Steel: Weight in pounds or tons.

   (4) Aluminum Buswork: Weight in pounds or tons.

   (5) Other Metals: Weight in pounds or tons.

   (6) Oil: Gallons (separate by type - less than 2 ppm PCB, 2 to 50 ppm PCB, and 50 or greater ppm PCB).

   (7) Gravel, Asphalt, Or Concrete: Weight in pounds or tons.

   (8) Batteries: Weight in pounds.

   (9) Wood Poles and Crossarms: Weight in pounds.

2. RECYCLED MATERIAL QUANTITY REPORT: Submit quantities for recycled material listed above to the COR after completion and prior to submittal of final invoice.

SECTION 13.7--USE OF PRODUCTS CONTAINING RECOVERED MATERIAL

1. GENERAL: If the products listed below are obtained as part of this project, purchase the items with the highest recovered material content possible unless recovered material content products are not available: 1) competitively within a reasonable time frame; 2) that meet performance criteria defined in the Standards or Project Specifications; or 3) at a reasonable price.

   (1) Construction Products:

   - Building Insulation Products
   - Carpet
   - Carpet cushion
   - Cement and concrete containing coal fly ash or ground granulated blast furnace slag
   - Consolidated and reprocessed latex paint
   - Floor Tiles
   - Flowable fill
   - Laminated Paperboard
   - Patio Blocks
   - Railroad grade crossing surfaces
   - Shower and restroom dividers/partitions

- Structural Fiberboard

(2) Landscaping Products:

- Compost made from yard trimmings or food waste
- Garden and soaker hoses
- Hydraulic Mulch
- Lawn and garden edging
- Plastic lumber landscaping timbers and posts

(3) Non-paper Office Products:

- Binders, clipboards, file folders, clip portfolios, and presentation folders
- Office recycling containers
- Office waste receptacles
- Plastic desktop accessories
- Plastic envelopes
- Plastic trash bags
- Printer ribbons
- Toner cartridges

(4) Paper and Paper Products:

- Commercial/industrial sanitary tissue products
- Miscellaneous papers
- Newsprint
- Paperboard and packaging products
- Printing and writing papers

(5) Park and Recreation Products:

- Park benches and picnic tables
- Plastic fencing
- Playground equipment
- Playground surfaces
- Running tracks

(6) Transportation Products:

- Channelizers
- Delineators
- Flexible delineators
- Parking stops
- Traffic barricades
- Traffic cones

(7) Vehicular Products:

- Engine coolants
- Re-refined lubricating oils
- Retread tires

(8) Miscellaneous Products:

- Awards and plaques
- Industrial drums
- Manual-grade strapping
- Mats
- Pallets
- Signage
- Sorbents

(9) For a complete listing of products and recommendations for recovered content, see http://www.epa.gov/cpg/products.htm

2. PRODUCTS CONTAINING RECOVERED MATERIAL REPORT: Provide the COR the following information for purchases of those items listed above:

(1) Quantity and cost of listed items with recovered material content and quantity and cost of listed items without recovered material content after completion and prior to submittal of final invoice.

(2) Written justification 7 days prior to purchase of listed items if recovered material content products are not available: 1) competitively within a reasonable time frame; 2) that meet performance criteria defined in the Standards or Project Specifications; or 3) at a reasonable price.

SECTION 13.8--DISPOSAL OF WASTE MATERIAL

1. GENERAL: Dispose or recycle waste material in accordance with applicable Federal, State and Local regulations and ordinances. In addition to the requirements of the Contract Clause "Cleaning Up", remove all waste material from the construction site. No waste shall be left on Western property, right-of-way, or easement. Burning or burying of waste material is not permitted.

2. HAZARDOUS, UNIVERSAL, AND NON-HAZARDOUS WASTES: Manage hazardous, universal, and non-hazardous wastes in accordance with State and Federal regulations.

3. USED OIL: Used oil generated from the Contractor activities shall be managed in accordance with used oil regulations.

4. RECYCLABLE MATERIAL: Reduce wastes, including excess Western material, by recycling, reusing, or reprocessing. Examples of recycling, reusing, or reprocessing include reprocessing of solvents; recycling cardboard; and salvaging scrap metals.

5. REFRIGERANTS AND RECEIPTS: Refrigerants from air conditioners, water coolers, refrigerators, ice machines and vehicles shall be reclaimed with certified equipment operated by certified technicians if the item is to be disposed. Refrigerants shall be reclaimed and not vented to the atmosphere. A receipt from the reclaimer stating that the refrigerant was reclaimed, the amount and type of refrigerant, and the date shall be submitted to the COR after completion and prior to submittal of final invoice.

6. HALONS: Equipment containing halons that must be tested, maintained, serviced, repaired, or disposed must be handled according to EPA requirements and by technicians trained according to those requirements.

7. SULFUR HEXAFLOURIDE (SF6): SF6 shall be reclaimed and not vented to the atmosphere.

8. WASTE MATERIAL QUANTITY REPORT: Submit quantities of total project waste material disposal as listed below to the COR after completion and prior to submittal of final invoice.

   (1) Sanitary Wastes: Volume in cubic yards or weight in pounds.

   (2) Hazardous or Universal Wastes: Weight in pounds.

   (3) PCB Wastes: Weight in pounds.

   (4) Other regulated wastes (e.g., lead-based paint or asbestos): Weight in pounds (specify type of waste in report).

SECTION 13.9--CONTRACTOR'S LIABILITY FOR REGULATED MATERIAL INCIDENTS

1. GENERAL: The Contractor is solely liable for all expenses related to spills, mishandling, or incidents of regulated material attributable to his actions or the actions of his subcontractors. This includes all response, investigation, cleanup, disposal, permitting, reporting, and requirements from applicable environmental regulation agencies.

2. SUPERVISION: The actions of the Contractor employees, agents, and subcontractors shall be properly managed at all times on Western property or while transporting Western's (or previously owned by Western) regulated material and equipment.

SECTION 13.10--POLLUTANT SPILL PREVENTION, NOTIFICATION, AND CLEANUP

1. GENERAL: Provide measures to prevent spills of pollutants and respond appropriately if a spill occurs. A pollutant includes any hazardous or non-hazardous substance that when spilled, will contaminate soil, surface water, or ground water. This includes any solvent, fuel, oil, paint, pesticide, engine coolants, and similar substances.

2. SPILL PREVENTION NOTIFICATION AND CLEANUP PLAN (Plan): Provide the Plan to the COR for approval 14 days prior to start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. Include the following in the Plan:

   (1) Spill Prevention measures. Describe the work practices or precautions that will be used at the job site to prevent spills. These may include engineered or manufactured techniques such as installation of berms around fuel and oil tanks; Storage of fuels, paints, and other substances in spill proof containers; and management techniques such as requiring workers to handle material in certain ways.

   (2) Notification. Most States and the Environmental Protection Agency require by regulation, that anyone who spills certain types of pollutants in certain quantities notify them of the spill within a specific time period. Some of these agencies require written follow up reports and cleanup reports. Include in the Plan, the types of spills for which notification would be made, the agencies notified, the information the agency requires during the notification, and the telephone numbers for notification.

   (3) Employee Awareness Training. Describe employee awareness training procedures that will be implemented to ensure personnel are knowledgeable about the contents of the Plan and the need for notification.

   (4) Commitment of Manpower, Equipment and Material. Identify the arrangements made to respond to spills, including the commitment of manpower, equipment and material.

(5) If applicable, address all requirements of 40CFR112 pertaining to Spill Prevention, Control and Countermeasures Plans.

3. TANKER OIL SPILL PREVENTION AND RESPONSE PLAN: Provide a Tanker Oil Spill Prevention and Response Plan as required by the Department of Transportation if oil tankers with volume of 3,500 gallons or more are used as part of the project. Submit the Tanker Oil Spill Prevention and Response Plan to the COR for approval 14 days prior to start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

SECTION 13.11--PESTICIDES

1. GENERAL: The term "pesticide" includes herbicides, insecticides, rodenticides and fungicides. Pesticides shall only be used in accordance with their labeling.

2. ENVIRONMENTAL PROTECTION AGENCY REGISTRATION: Use EPA registered pesticides.

3. PESTICIDE USE PLAN: The plan shall contain: 1) a description of the pesticide to be used, 2) where it is to be applied, 3) the application rate, 4) a copy of the label, and 5) a copy of required applicator certifications. Submit two copies of the pesticide use plan to the COR for approval 30 days prior to the date of intended application. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. Within seven days after application, submit a written report in accordance with Standard 2 – Sitework, Section 2.1.1.5, "Soil-Applied Herbicide".

SECTION 13.12--TREATED WOOD POLES AND MEMBERS RECYCLING OR DISPOSAL

Whenever practicable, treated wood poles and members removed during the project shall be recycled or transferred to the public for some uses. Treated wood poles and members transferred to a recycler, landfill, or the public shall be accompanied by a written consumer information sheet on treated wood as provided by Western. Obtain a receipt form, part of the consumer information sheet, from the recipient indicating that they have received, read, and understand the consumer information sheet. Treated wood products transferred to right-of-way landowners shall be moved off the right-of-way. Treated wood product scrap or poles and members that cannot be donated or reused shall be properly disposed in a landfill that accepts treated wood and has signed Western's consumer information sheet receipt. Submit treated wood pole and members consumer receipt forms to the COR after completion and prior to submittal of final invoice.

SECTION 13.13--PREVENTION OF AIR POLLUTION

1. GENERAL: Ensure that construction activities and the operation of equipment are undertaken to reduce the emission of air pollutants. Submit a copy of permits, if required, from Federal, State, or local agencies to the COR 14 days prior to the start of work.

2. MACHINERY AIR EMISSIONS: The Contractor and subcontractor machinery shall have, and shall use the air emissions control devices required by Federal, State or Local Regulation or ordinance.

3. DUST ABATEMENT: Dust shall be controlled. Oil shall not be used as a dust suppressant. Dust suppressants shall be approved by the COR prior to use.

SECTION 13.14--HANDLING AND MANAGEMENT OF ASBESTOS CONTAINING MATERIAL

1. GENERAL: Obtain the appropriate Federal, State or local licenses or certifications prior to disturbing any regulated asbestos-containing material. Submit a copy of licenses and/or certifications for asbestos work to the COR prior to work. Ensure: 1) worker and public safety requirements are fully implemented and 2) proper handling, transportation, and disposal of asbestos containing material.

2. TRANSPORTATION OF ASBESTOS WASTE: Comply with Department of Transportation, Environmental Protection Agency, and State and Local requirements when transporting asbestos wastes.

3. CERTIFICATES OF DISPOSAL AND RECEIPTS: Obtain certificate of disposals for waste if the waste is a hazardous waste or receipts if the waste is a non-hazardous waste. Submit copies to the COR after completion and prior to submittal of final invoice.

SECTION 13.15--MATERIAL WITH LEAD-BASED PAINT

1. GENERAL: Comply with all applicable Federal, State and local regulations concerning work with lead-based paint, disposal of material painted with lead-based paint, and management of these material. OSHA and General Industry Standards apply to worker safety and right-to-know issues. Federal EPA and State agencies regulate waste disposal and air quality issues.

2. TRANSFER OF PROPERTY: If lead-based paint containing equipment or material is to be given away or sold for reuse, scrap, or reclaiming, a written notice shall be provided to the recipient of the material stating that the material contains lead-based paint and the Hazardous Waste regulations may apply to the waste or the paint in some circumstances. The new owner must also be notified that they may be responsible for compliance with OSHA requirements if the material is to be cut, sanded, abraded, or stripped of paint. Submit a copy of lead paint notices to the COR upon completion and prior to submittal of final invoice.

3. CERTIFICATES OF DISPOSAL AND RECEIPTS: Obtain certificate of disposals for waste if the waste is a hazardous waste or receipts if the waste is a non-hazardous waste. Submit copies to the COR after completion and prior to submittal of final invoice.

SECTION 13.16--PREVENTION OF WATER POLLUTION

1. GENERAL: Ensure that surface and ground water is protected from pollution caused by construction activities and comply with applicable regulations and requirements.

2. PERMITS: Ensure that:

   (1) Streams, and other waterways or courses are not obstructed or impaired, unless the appropriate Federal, State or local permits have been obtained;

   (2) A National Pollutant Discharge Elimination System (NPDES) Permit for the Prevention of Stormwater Pollution from Construction Projects is obtained if required by State or Federal regulation; and

   (3) A dewatering permit is obtained from the appropriate agency if required for construction dewatering activities.

   (4) Submit copies of any water pollution permits to the COR prior to work.

3. EXCAVATED MATERIAL AND OTHER CONTAMINANT SOURCES: Control runoff from excavated areas and piles of excavated material, construction material or wastes (to include truck washing and concrete wastes), and chemical products such as oil, grease, solvents, fuels, pesticides, and pole treatment compounds. Excavated material or other construction material shall not be stockpiled or deposited near or on streambanks, lake shorelines, ditches, irrigation canals, or other areas where run-off could impact the environment.

4. MANAGEMENT OF WASTE CEMENT OR WASHING OF CEMENT TRUCKS: Do not permit the washing of cement trucks or disposal of excess cement in any ditch, canal, stream, or other surface water. Cement wastes shall be disposed in accordance with all Federal, State, and local regulations. Cement wastes shall not be disposed on any Western property, right-of-way, or easement; nor on any streets, roads, or property without the owner's consent.

5. STREAM CROSSINGS: Crossing of any stream or other waterway shall be done in compliance with Federal, State, and local regulations. Crossing of some waterways may be prohibited by landowners, State or Federal agencies or require permits.

SECTION 13.17--TESTING, DRAINING, REMOVAL, AND DISPOSAL OF OIL-FILLED ELECTRICAL EQUIPMENT

1. SAMPLING AND TESTING OF INSULATING OIL FOR PCB CONTENT: Sample and analyze the oil of electrical equipment for PCB's. Use analytical methods approved by EPA and applicable State regulations. Decontaminate sampling equipment according to documented good laboratory practices (these can be contractor developed or EPA standards). Use only laboratories approved by Western. The COR will furnish a list of approved laboratories.

2. PCB TEST REPORT: Provide PCB test reports that contain the information below for disposing of oil-filled electrical equipment. Submit the PCB test report prior to draining, removal, or disposal of oil or oil-filled equipment that is designated for disposal.

   - Name and address of the laboratory
   - Description of the electrical equipment (e.g. transformer, breaker)
   - Serial number for the electrical equipment.
   - Date sampled
   - Date tested
   - PCB contents in parts per million (ppm)
   - Unique identification number of container into which the oil was drained (i.e., number of drum, tank, tanker, etc.)

3. OIL CONTAINING PCB: Comply with the Federal regulations pertaining to PCBs found at Title 40, Part 761 of the U.S. Code of Federal Regulations (40 CFR 761).

4. REMOVAL AND DISPOSAL OF INSULATING OIL AND OIL-FILLED ELECTRICAL EQUIPMENT: Once the PCB content of the oil has been identified from laboratory results, the oil shall be transported and disposed, recycled, or reprocessed according to 40 CFR 761 (if applicable), Resource Conservation and Recovery Act (RCRA) "used oil", and other applicable regulations. Used oil may be transported only by EPA-registered used oil transporters. The oil must be stored in containers that are labeled "Used Oil." Use only U.S. transporters and disposal sites approved by Western.

5. OIL AND OIL-FILLED ELECTRICAL EQUIPMENT RECEIPT: Obtain and submit a receipt for oil and oil-filled equipment transported and disposed, recycled, or reprocessed to the COR upon completion and prior to submittal of final invoice.

SECTION 13.18--REMOVAL OF OIL-CONTAMINATED MATERIAL

1. GENERAL: Removing oil-contaminated material includes excavating, stockpiling, testing, transporting, cleaning, and disposing of these material. Personnel working with PCBs shall be trained in accordance with OSHA requirements. Submit employee training documentation records to the COR 14 days prior to the start of work.

2. CLEANUP WORK MANAGEMENT PLAN: Provide a Cleanup Work Management Plan that has been approved by applicable Federal, State, or Local environmental regulation agencies. Submit the plan to the COR for approval 14 days prior to the start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. The plan shall address on-site excavation of contaminated soil and debris and include the following:

   - Identification of contaminants and areas to be excavated
   - Method of excavation
   - Level of personnel/subcontractor training
   - Safety and health provisions
   - Sampling requirements including quality control, laboratory to be used
   - Management of excavated soils and debris
   - Disposal methods, including transportation to disposal

3. EXCAVATION AND CLEANUP: Comply with the requirements of Title 40, Part 761 of the U.S. Code of Federal Regulations (40 CFR 761).

4. TEMPORARY STOCKPILING: Excavated material, temporarily stockpiled on site, shall be stored on heavy plastic and covered to prevent wind and rain erosion at a location designated by the COR.

5. SAMPLING AND TESTING: Sample contaminated debris and areas of excavation to ensure that contamination is removed. Use personnel with experience in sampling and, in particular, with experience in PCB cleanup if PCBs are involved. Use analytical methods approved by EPA and applicable State regulations.

6. TRANSPORTION AND DISPOSAL OF CONTAMINATED MATERIAL: The Contractor shall be responsible and liable for the proper loading, transportation, and disposal of contaminated material according to Federal, State, and local requirements. Use only U.S. transporters and disposal sites approved by Western.

7. POST CLEANUP REPORT: Provide a Post-Cleanup Report that describes the cleanup of contaminated soils and debris. Submit the report to the COR upon completion and prior to submittal of final invoice. The report shall contain the following information:

   - Site map showing the areas cleaned
   - Description of the operations involved in excavating, storing, sampling, and testing, and disposal
   - Sampling and analysis results including 1) Name and address of the laboratory, 2) sample locations, 3) sample dates, 4) analysis dates, 5) contents of contaminant (e.g. PCB or total petroleum hydrocarbons) in parts per million (ppm)
   - Certification by the Contractor that the cleanup requirements were met
   - Copies of any manifests, bills of lading, and disposal certificates
   - Copies of correspondence with regulatory agencies that support completion of the cleanup

SECTION 13.19—CONSERVATION OF NATURAL RESOURCES

1. GENERAL: Federal law prohibits the taking of endangered, threatened, proposed or candidate wildlife and plants, and destruction or adverse modification of designated Critical Habitat. Federal law also prohibits the taking of birds protected by the Migratory Bird Treaty Act. "Take" means to pursue, hunt, shoot, wound, kill, trap, capture or collect a protected animal or any part thereof, or attempt to do any of those things.

2. KNOWN OCCURRENCE OF PROTECTED SPECIES OR HABITAT: Following issuance of the notice to proceed, and prior to the start of construction, Western will provide training to all contractor and subcontractor personnel involved in the construction activity. Untrained personnel shall not be allowed in the construction area. Western shall provide two sets of plan and profile drawings showing sensitive areas located on or immediately adjacent to the transmission line right-of-way and/or facility. These areas shall be considered avoidance areas. Prior to any construction activity, the avoidance areas shall be marked on the ground in a manner approved by the COR. If access is absolutely necessary, first obtain permission from the COR, noting that a Western and/or other government or tribal agency biologist may be required to accompany personnel and equipment. Ground markings shall be maintained through the duration of the contract. Western will remove the markings during or following final inspection of the project.

3. UNKNOWN OCCURRENCE OF PROTECTED SPECIES OR HABITAT: If evidence of a protected species is found in the project area, the contractor shall immediately notify the COR and provide the location and nature of the findings. The contractor shall stop all activity in the vicinity of the protected species or habitat and not proceed until directed to do so by the COR.

4. CONTRACT ADJUSTMENTS: Where appropriate by reason of delays caused by a discovery, the Contracting Officer may make adjustments to contract requirements.

APPENDIX E

MITIGATION ACTION PLAN
LOS BANOS – GATES (PATH 15) TRANSMISSION PROJECT

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Western Area Power Administration

Mitigation Action Plan
for the
Los Banos – Gates (Path 15) Transmission Project

1.0 INTRODUCTION

1.1 HISTORY AND BACKGROUND

In May 2001, Secretary of Energy Spencer Abraham directed the Western Area Power Administration (Western) to take the first steps, including the preparation of environmental studies, toward developing the Los Banos - Gates Transmission Project, also known as the Path 15 Project. This directive was issued to carry out a recommendation in the May 2001 National Energy Policy. Western is a power marketing administration within the Department of Energy (DOE) whose role is to market and transmit electricity from multi-use water projects in the western United States, including California. The Path 15 Project, located in California's western San Joaquin Valley, would relieve a bottleneck (Path 15) in the interstate power transmission system.

Path 15 is not a single transmission line, but rather a group of interconnected lines that allow power to flow between northern and southern California. Transmission restrictions on Path 15 can also affect power flows in other western states. The Path 15 Project would upgrade the current transfer capacity of Path 15, currently rated at 3,750 megawatts (MW) south-to-north, to 5,000 MW or more, and would increase transfer capacity to meet California's energy needs. The proposed Path 15 Project would consist of building a new 84-mile long, 500-kilovolt (kV) transmission line between Los Banos Substation in Merced County, California, and Gates Substation near Coalinga in Fresno County, California. Pacific Gas and Electric Company (PG&E) would make related improvements at both substations, and in the underlying 230-kV transmission system. Trans Elect, Inc. is a major participant in the Path 15 Project, providing private funding for the construction of the transmission line.

The Project, as proposed, is the same as the preferred alternative described and analyzed in the environmental documents for the original Los Banos – Gates Transmission Project, which was prepared in conjunction with the California - Oregon Transmission Project (COTP) in 1988. These two projects were the subject of a single set of documents prepared in 1988 that served as the Final Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) and the Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA). The EIS is entitled *"Final Environmental Impact Statement for the California – Oregon Transmission Project (DOE/EIS-0128)."*

Since the Final EIS was prepared in 1988, Western elected to prepare a Supplement Analysis to determine the revived Path 15 Project presented substantial changes in the proposed action relevant to environmental concerns, or if there were significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts

(10 Code of Federal Regulations [CFR] 1021.314 (c) and 40 CFR 1502.9 (c) (1) (i)). The Supplement Analysis was prepared by reviewing the 1988 Final EIS environmental analysis and supporting documents and the most current information available on the Project. It was issued in August 2001.

The Supplement Analysis addressed resource and regulatory changes that had occurred since 1988, but did not identify any substantial changes to the significant environmental impacts identified in the 1988 Final EIS, or any new significant impacts. Based on the findings of the Supplement Analysis, Western determined that a Supplemental EIS was not required and issued a Record of Decision (ROD) on December 20, 2001 (66 FR 65703).

As planning for the transmission line progressed, it became necessary to relocate portions of the line from the tentative centerline studied in the original EIS. Western prepared a second Supplement Analysis on these relocations, as some of them were outside of the corridor established for the original studies. The purpose of this second Supplement Analysis was to assess the relocations, and determine if they were significant enough to warrant the preparation of a Supplemental EIS. This Supplement Analysis demonstrated that no substantial changes or significant new circumstances were associated with the relocations. The level of expected environmental impact from the Project was actually reduced by the relocations, primarily because the original locations were on very steep terrain and would require longer access roads on steeper slopes to reach them. The relocations are closer to existing access and are on milder terrain. The Supplement Analysis, along with a determination that a Supplemental EIS was not necessary, was issued on May 9, 2003.

2.0 FUNCTION AND ORGANIZATION OF THE MITIGATION ACTION PLAN

The DOE requirements for preparing a Mitigation Action Plan (MAP) are specified in 10 CFR 1021 (Section 331(a), National Environmental Policy Act Implementing Procedures). These regulations state that following the completion of each EIS and its associated ROD, DOE shall prepare a MAP that addresses mitigation commitments expressed in the ROD. The MAP shall explain how the corresponding mitigation measures, designed to mitigate adverse environmental impacts associated with the course of action directed by the ROD, will be planned and implemented.

This MAP addresses the construction, operation, and maintenance of the new 84-mile long 500-kV transmission line. Necessary work conducted by PG&E at their substations will occur primarily within the previously disturbed area inside the substation boundaries. At Los Banos, the substation will be expanded to the east to incorporate approximately four acres immediately adjacent to the substation. This area is outside of the fence around the substation proper, but within PG&E's fenced property. Western or Trans Elect, Inc. will also not have a role in upgrading the various existing PG&E 230-kV system components.

Mitigation measures were identified in the 1986 draft EIS, the Final EIS, and in the 2001 Supplement Analysis. The mitigation measures in the original EIS were the basis for those adopted in the 2001 Supplement Analysis. Since the original Los Banos – Gates Transmission Project was envisioned as a joint participation project with State-regulated participants, the EIS

was written to satisfy both NEPA and CEQA requirements. The Project is now a Federal undertaking. As such, some of the original mitigation measures that applied to the State-regulated participants were not carried forward from the EIS into the Supplement Analysis. The California Public Utility Commission's (CPUC) October 2001 *"Los Banos – Gates 500-kV Transmission Project: Draft and Final Supplemental Environmental Impact Report (SCH #850-40914)"* identifies extensive mitigation and reporting/monitoring requirements which would be imposed on PG&E if they were responsible for the Path 15 Project. Western is familiar with these mitigation measures, and its identified mitigation addresses many of the same concerns. However, Western, as a Federal agency and not a State-regulated utility, is not subject to CPUC authority or the mitigation provisions of that agency's EIR.

The following sections describe the plans and actions Western will implement and verify mitigation action commitments expressed in the 2001 Supplement Analysis and the ROD. The second Supplement Analysis issued in 2003 did not contain additional mitigation commitments that need to be addressed in this MAP.

Section 3.0 describes the monitoring and verification of mitigation actions and the reporting requirements. Section 4.0 describes the mitigation commitments and action plans for the Path 15 Project. The mitigation commitment and action plan, as specified in the 2001 Supplement Analysis and ROD, is composed of the tasks, responsible parties, and action target completion dates for the mitigation.

3.0 MITIGATION ACTION PLAN MONITORING AND REPORTING SYSTEM

Section 5.d.(11)(f) of DOE Order 451.1B, National Environmental Policy Act Compliance Program, requires Western to report MAP activities in its Annual Site Environmental Report, published by January 31 of each year. This annual report reflects new information or changed circumstances. If major changes to mitigation included in this MAP are necessary, these changes will be incorporated in an updated MAP and described in the annual report. The revised MAP and annual report will be available to the public and posted on Western's web site. The original MAP, Revision 1 was issued on January 28, 2003. This version, Revision 2, was issued on the date below to show the progress on the mitigation commitments and action plan provisions, and update the schedule dates on those commitments and provisions. It also serves to incorporate the terms and conditions contained in the U.S. Fish and Wildlife Service's Biological Opinion, the U.S. Army Corps of Engineers' Section 404 Clean Water Act permit, and the California State Regional Water Quality Control Board's Section 401 Water Quality Certification.

A member of Western's environmental staff will verify mitigation results and determine if the mitigation action achieved its intended purpose. Western will use existing organizational and administrative controls to gather information regarding implementation and status of mitigation actions. Such controls include applicable reporting systems, inspection, and verification. Western will report inspection and verification results in its Annual Site Environmental Report on the anniversary of the MAP. When mitigation actions are completed and verified, the information will be included in the Annual Site Environmental Report.

Mitigation also may be monitored in accordance with Western's Mitigation Monitoring Policy (Attachment 1).

The construction contractor shall secure all necessary permits required by applicable Federal, State, and local environmental laws, orders, and regulations. Western will obtain the Section 401 and Section 404 permits referenced above. The construction contractor shall comply with any mitigation conditions set in permits issued for the Path 15 Project. Some of those conditions are not known at this time, so they are not addressed in this MAP. In addition to the project area, all applicable mitigation measures shall also be implemented on any lands obtained directly by the construction contractor for materials storage/staging, work offices, parking, etc. The contractor shall also hire, subject to Western approval, independent qualified biological and cultural resources monitors. The monitors shall ensure the protection of the resources through adherence to all specified mitigation measures, permit stipulations, Biological Opinion conditions, and cultural resources Programmatic Agreement requirements.

4.0 MITIGATION COMMITMENTS AND ACTION PLANS

Generic, general mitigation practices are part of Western's construction standard specifications (Standard 13, Environmental Quality Protection). More detailed mitigation measures, or those not covered in Standard 13, are included in Divisions 2a and 13 of the construction specifications package. All are made binding on the construction contractor as terms of the contract. Applicable generic mitigation measures were defined for the new transmission line, and are included in Table 4.1 below, along with the parties responsible for their application, specific actions needed to ensure effectiveness, and target dates for completion. The generic mitigation practices are determined by the type of construction project being considered and its environmental impacts. In some instances, environmental impacts are reduced with the employment of these mitigation measures. Western adopted the generic mitigation measures as Appendix E of the 2001 Supplement Analysis. The MAP ensures the generic mitigation practices are implemented. The short-term mitigation commitments and action plan identified in the 2001 Supplement Analysis are presented in Table 4.2. Table 4.3 presents the long-term mitigation commitments and action plan that Western committed to in Appendix E of the Path 15 2001 Supplement Analysis.

In addition to the mitigation in the tables below, Western also committed in its ROD to the completion of the Endangered Species Act Section 7 consultation, the National Historic Preservation Act Section 106 consultation, and the consultation with interested Native American tribes. Formal consultation under Section 7 was completed with the issuance of a Biological Opinion on June 10, 2003. However, Western will continue provide information to the USFWS under the terms and conditions in the Biological Opinion for the duration of the construction period. Formal consultation with the SHPO was also concluded under the terms of a Programmatic Agreement signed by affected agencies and parties. Consultation and coordination with interested Native American tribes is ongoing, and will continue for the duration of the Project. These processes were all under way as the initial mitigation action plan was finalized. The mitigation action plan is a living document and will be updated periodically as tasks are completed, as demonstrated by the issuance of this Revision 2.

Some of the mitigation measures below still reference PG&E actions or obsolete transmission line segments. This is partly due to the fact that the original mitigation measures are from the 1988 EIS. Also, when the 2001 Supplement Analysis was completed, PG&E was still involved in a parallel CPUC applicant process. It was thought at that time that if the project were to come under a Federal lead, it would remain a joint participation project; this is no longer the case. For these reasons, some of the mitigation measures below are no longer applicable and are followed by notes in brackets to reflect the current situation.

Table 4.1: Applicable Generic Mitigation Measures and Action Plan for Path 15 Transmission Line Project.

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
1. Avoid active oil wells and water extraction wells and critical facilities. Cross non-critical facilities if resources cannot be avoided. [Note: Since the FEIS was completed, most of the oil/gas facilities at the south end of the project have been abandoned, and some removed.]	A7900	Task a: Incorporate requirement into structure locations.	Complete
	G5600	Task b: Completed through centerline selection.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
2. PG&E will work with California Department of Water Resources (CDWR) to site towers compatible with the existing facilities at Little Panoche Reservoir (West-5) or the proposed facilities at the Los Banos Grandes Offstream Storage project (West-3 and East). [Western will assume this responsibility for the proposed route.]	G5600	Task a: Determine structure locations.	Complete
	A7400/N1600	Task b: Coordinate with CDWR.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
3. Conduct site specific scoping sessions as required under Section 7 (Endangered Species Act, 1973, as amended) consultation procedures to focus field studies, impact analysis, and potential mitigation assessments. [The above 1988 mitigation measure is poorly written and somewhat redundant with those below. Western will coordinate with Federal, State and Tribal resource agencies to identify sensitive species and develop appropriate field surveys for those species.]	A7400	Task a: Obtain species list for project area.	Complete
	A7400/N5800	Task b: Prepare Statement of Work (SOW) for contractor to conduct field surveys for listed species.	Complete
	N5800	Task c: Procure contractor services.	Complete
Conduct pre-construction surveys for listed and special-status animal species 14-30 days in advance of ground-disturbing activities per Biological Opinion and USFWS survey protocols. This will require a rolling schedule to ensure the 14-30-day window is maintained.	Contractor	Task d: Determine areas of active work at least 30 days out.	Rolling schedule
	Contractor's Monitors	Task e: Conduct surveys in accordance with Biological Opinion.	Rolling schedule
	Contractor's Monitors	Task f: Prepare and deliver weekly reports to Western.	12/04
	A7400	Task g: Coordination with USFWS and CA DFG as required.	12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
4. Conduct ground surveys of potential sensitive plant habitat during the appropriate period, prior to selection of final alignments.	Contractor	Task a: Contractor to conduct field surveys per SOW.	Complete
	Contractor/ A7400	Task b: Field maps available.	Complete
	Contractor	Task c: Contractor prepares biological report in Biological Assessment format.	Complete
Conduct pre-construction surveys for listed and special-status animal species 14-30 days in advance of ground-disturbing activities per Biological Opinion and USFWS survey protocols. This will require a rolling schedule to ensure the 14-30-day window is maintained.	Contractor	Task d: Determine areas of active work at least 30 days out.	Rolling schedule
	Contractor's Monitors	Task e: Conduct surveys in accordance with Biological Opinion.	Rolling schedule
	Contractor's Monitors	Task f: Prepare and deliver weekly reports to Western.	12/04
	A7400	Task g: Coordination with USFWS and CA DFG as required.	12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
5. Detailed mitigation plans would be developed that define the extent and types of additional field studies, and how the results of these studies could be coordinated with detailed engineering surveys. As part of the siting process, numerous construction and siting details will be developed and presented to the regulatory agencies for review and comment. Where mitigation measures are specified in the plan, field monitoring schedules and progress reports will be prepared and submitted to the agencies. Biologists and archaeologists could accompany crews during the site selection and construction phases to ensure sensitive resources are identified and avoided. The results of the siting and mitigation efforts for the Los Banos-Gates project would also be presented in a report of findings to the CPUC and other appropriate agencies. [This measure is written to accommodate a joint participation project. Western has developed this Mitigation Action Plan, and has (and will) utilize biological and cultural resources information in siting structures and identifying exclusion areas. Reporting and coordination appropriate for a Federal project will be accomplished.]	A7400	Task a: Prepare and finalize Mitigation Action Plan.	Complete
	Contractor/ A7400	Task b: Complete cultural resources and paleontological field surveys.	Complete
	A7400	Task c: Complete Biological Assessment and submit to FWS.	Complete
	Contractor/ A7400	Task d: Conduct spring biological surveys on access road locations and centerline relocations.	Complete
	G5600	Task e: Adjust structure and access road locations to avoid sensitive resources where necessary/possible.	Complete
	A7400/G5600	Task f: Ensure compliance with Biological Opinion (BO); stake exclusion areas in the field.	Rolling schedule
	G5600/A7400/ Contractor	Task g: Monitor site work for compliance with BO.	12/04
	G5600/A7400/ Contractor	Task h: Monitor site work for undiscovered cultural resources; stop work and notify if any are found.	12/04
	G5600/A7400/ Contractor	Task i: Monitor site work for paleontological resources in designated areas.	12/04
Mitigation Action Plan Revision 2	A7400	Task j: Revise MAP with new provisions from BO, etc. and correct/update target completion dates.	11/15/03
	A7400/FWS	Task k: Obtain FWS review and approval of revised MAP.	No comments
	A7400/ N6220	Task l: Finalize and approve MAP; make available to agencies and the public.	12/15/03

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
6. Technical specialists, including biologists, will survey the preliminary alignment in the field to determine any site-specific conditions that can be avoided. For biological resources, these will include San Joaquin kit fox burrows and denning areas, areas where blunt-nosed leopard lizard occur, giant kangaroo rat burrows, raptor nesting areas, and productive wetlands areas. [All applicable conditions in the Biological Assessment and Biological Opinion will be adhered to in meeting this mitigation measure.]	Contractor/ A7400	Task a: Determine site-specific sensitive areas in the field.	Complete
	G5600/A7400	Task b: Ensure compliance with BO; stake exclusion areas in the field.	Rolling Schedule
	G5600/A7400/ Contractor	Task c: Monitor site work for compliance with BO.	12/04
Conduct pre-construction surveys for listed and special-status animal species 14-30 days in advance of ground-disturbing activities per Biological Opinion and USFWS survey protocols. This will require a rolling schedule to ensure the 14-30-day window is maintained. Includes field office locations, parking areas, materials storage and prefabrication sites, etc. used by the construction contractor.	Contractor	Task d: Determine areas of active work at least 30 days out.	Rolling schedule
	Contractor's Monitors	Task e: Conduct surveys in accordance with Biological Opinion.	Rolling schedule
	Contractor's Monitors	Task f: Prepare and deliver weekly reports to Western.	12/04
	A7400	Task g: Coordination with USFWS and CA DFG as required.	12/04
7. PG&E will continue to consult with Merced and Fresno County officials during the siting process. County personnel will be able to review the proposed actions and submit their recommendations to the CPUC. [Western and/or the construction contractor will continue to coordinate with appropriate county officials until the project is completed; reporting to CPUC will not be required.]	N1600/ Contractor	Task a: Coordinate with and inform counties of plans and crossings, as needed.	12/04
8. Locate new access roads parallel to contours of landform wherever feasible.	G5600	Task a: Design access roads to follow landforms and minimize erosion potential.	Complete
9. Avoid diagonal orientations of transmission lines across cultivated fields.	G5600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely.	Complete
	G5600/N1600	Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary.	Complete

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
10. If practical, tower placement will be adjusted to avoid orchards and vineyards, row crops, and furrow-irrigated crops (with tower-furrow angles greater than 61%). When possible, the alignment should avoid more heavily cultivated crops in preference for nonagricultural land or crops such as alfalfa, corn, and small grains.	G5600 G5600/N1600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary. In certain areas, use a single-pole design to minimize impacts.	Complete Complete
11. When locating towers in row crops is unavoidable, if possible, preference should be given to fields with rows that would be parallel, rather than perpendicular, to the transmission line.	G5600 G5600/N1600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary. In certain areas, use a single-pole design to minimize impacts.	Complete Complete
12. Place transmission lines and towers toward the center of the field where possible. Avoid placing towers at the edge of fields where canals or irrigation ditches are located.	G5600 G5600/N1600	Task a: Where possible, site the transmission line to avoid agricultural areas entirely. Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary. In certain areas, use a single-pole design to minimize impacts.	Complete Complete
13. Avoid angular joining of transmission line alignments.	G5600	Task a: Consider when defining transmission line centerline.	Complete

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
14. Avoid mechanical move irrigation systems. Select crops using flood or border check irrigation over those using furrow irrigation.	G5600	Task a: Where possible, site the transmission line to avoid agricultural areas, and especially irrigated areas, entirely.	Complete
	G5600/N1600	Task b: Where avoidance is not feasible, site structures to minimize impact to agricultural activities. Landowner coordination may be necessary.	Complete
15. Tower placement should avoid areas where riparian vegetation or other vegetation communities of value occur.	A7400/G5600	Task a: Evaluate riparian and other special vegetation communities. Site transmission line to avoid if possible; identify crossing location(s) of least impact if not possible.	Complete
	A7400/G5600/ Contractor	Task b: Monitor construction activities.	12/04
16. Avoid siting towers on ridgelines and hilltops wherever possible. This measure will serve to reduce the incidence of "skylining;" that is, positioning a tower so that it is seen silhouetted against the skyline. The measure will also help prevent highly visible alterations of land forms resulting from grading operations. [The terrain in the Project area will necessitate placing structures on high points. However, there will be two existing transmission lines in the foreground, and higher ridges behind the new line, so visual impacts will be slight.]	A7400/G5600	Task a: Incorporate visual sensitivity into transmission line siting considerations/criteria.	Complete
17. Minimize the number of towers visible from sensitive viewpoints within recreation areas.	A7400/G5600	Task a: Incorporate visual sensitivity into transmission line siting considerations/criteria.	Complete
18. In areas identified as visually sensitive, the finish on transmission towers should be dull and non-reflective.	A7900	Task a: Incorporate requirement into construction specification – Divisions 4 and 5.	Complete
19. Temporary facilities, such as construction yards, and conductor tensioning and splicing sites should be sited to minimize disruption of the landscape by landform alteration and vegetation removal.	G5600	Task a: Incorporate requirement into construction specification.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	A7400/G5600/ Contractor	Task c: Monitor site work.	12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
20. PG&E will work with affected property owners, as necessary, on alignment and tower location during the right-of-way acquisition process. [Western will work with property owners on alignment and structure locations, as necessary.]	N1600/G5600	Task a: Work with landowners on final siting of structures and access roads, if necessary.	Complete
21. Appropriate selection of design parameters (i.e, conductor surface gradient, conductor diameter, and conductor configuration) and proper location of the transmission line route to avoid critical locations will reduce corona-induced radio and television interference to acceptable levels.	A7900	Task a: Incorporate into design.	Complete
	N1600/N5500	Task b: Respond promptly to any complaints.	Open
	N5500	Task c: Complete modifications to mitigate problem.	Open
22. Conduct pre-construction field surveys to locate and record cultural and paleontological resources within the project right-of-way and, in particular, resources that are situated at proposed facilities and roadway locations. [Includes all field office locations, parking areas, materials storage and prefabrication sites, etc. used by the construction contractor. Also address traditional cultural properties and Native American use areas, as identified by the ethnographic study.]	Contractor/ A7400	Task a: Conduct intensive field surveys.	Complete
	Contractor/ A7400	Task b: Conduct ethnographic study.	Complete
	A7400	Task c: Consult with tribes.	12/04
	A7400	Task d: Consult with the State Historic Preservation Officer (SHPO).	Complete
	A7400	Task e: Prepare and execute a Programmatic Agreement governing cultural resources activities.	Complete
	A7400/G5600	Task f: Determine project modifications to avoid/minimize impact.	Complete
	A7400/G5600/ Contractor	Task g: Construction monitoring.	12/04
Conduct paleontological survey for fossil resources.	Contractor/ A7400	Task h: Field surveys for paleo resources.	Complete
	Contractor	Task i: Field monitoring in sensitive areas.	12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
23. Avoid sensitive resources by locating construction activities in non-sensitive locations. Consultation with cultural and paleontological resource professionals during the siting of the transmission line will facilitate mitigation through avoidance.	Contractor/ A7400	Task a: Conduct intensive field surveys.	Complete
	Contractor/ A7400	Task b: Conduct ethnographic study.	Complete
	A7400	Task c: Consult with tribes.	Complete
	A7400	Task d: Consult with SHPO.	Complete
	A7400/G5600	Task e: Determine project modifications to avoid/minimize impact.	Complete
	A7400/G5600/ Contractor	Task f: Construction monitoring.	12/04
24. Conduct cultural resource data recovery programs, through surface collection and excavation, at significant resource sites where adverse impacts cannot be otherwise mitigated. [No eligible sites were recorded during the Class III survey of the right-of-way and access road easements. Construction monitoring not necessary unless cultural resources are discovered during construction. Native American monitoring of certain locations important to affected tribes will be monitored by a Native American monitor.]	Contractor/ A7400	Task a: Conduct intensive field surveys.	Complete
	Contractor/ A7400	Task b: Conduct ethnographic study.	Complete
	A7400	Task c: Consult with tribes.	Complete
	A7400	Task d: Consult with SHPO.	Complete
	A7400/G5600	Task e: Determine project modifications to avoid/minimize impact.	Complete
Monitoring of selected sites by Native American monitor.	A7400/G5600/ Contractor	Task f: Construction monitoring.	12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
25. Consult with Native Americans concerning Native American resources that cannot be mitigated through avoidance, in order to seek mutually acceptable solutions to minimize project effects on significant resources.	Contractor/ A7400	Task a: Conduct intensive field surveys.	Complete
	Contractor/ A7400	Task b: Conduct ethnographic study.	Complete
	A7400	Task c: Consult with tribes.	Complete
	A7400/G5600	Task e: Determine project modifications to avoid/minimize impact.	Complete
Monitoring of selected sites by Native American monitor.	A7400/G5600/ Contractor	Task f: Construction monitoring.	12/04
26. Comply with all terms and conditions of the Section 401 Water Quality Certification and Section 404 Clean Water Act permits as they apply to crossings of Waters of the United States.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
27. Comply with all terms, conditions, and other requirements contained in the USFWS Biological Opinion (June 10, 2003) for the Path 15 Project.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

Generic Mitigation Commitment	Responsible Party	Action	Target Completion Date
28. Coordinate with California Department of Fish and Game on State special-status species.	A7400	Task a: Provide DFG with applicable project documents: BA, BO, special-status species report, maps, etc.	Complete
	A7400	Task b: Address DFG comments/concerns.	Open
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

Table 4.2: Short-term Mitigation Commitments and Action Plan for the Path 15 Transmission Project

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
1. Soil surfaces will be wetted at a rate of 0.5 gallons of water per square yard two times per day for dust control (EPA 1977). This measure reduces dust by about 50 percent. [Dusting of agricultural crops, orchards, vineyards, grasslands, etc. will not be allowed. The Contractor shall prevent generating dust by watering, as necessary, the roads, structure sites, staging areas, tensioning and pulling sites, and any other construction area having the potential to generate dust.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
2. When possible construction activities should be scheduled during periods of low wind to reduce fugitive dust emissions.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
3. All construction equipment should be frequently monitored and serviced to ensure conformance with exhaust standards.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
4. Existing roads will be used for access wherever possible. Minimize number and length of new construction access roads particularly in intensively farmed areas. Use temporary spur roads to towers and remove those roads not required for maintenance. Access roads should be designed to the minimum standard necessary for construction and maintenance vehicle access.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	12/04
5. Minimize vegetation stripping along the alignment.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600/A7400/ Contractor	Task b: Monitor site work; restore/re-seed where appropriate.	12/04
6. Design drainage control structures to carry runoff at appropriate velocities. Use properly sized and installed culverts under permanent access road fill sections and discharge runoff to natural drainages that will not be overloaded.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/ Contractor	Task c: Monitor site work.	12/04
7. Minimize steepness and unobstructed length of fill slopes. Protect new constructed fills from rain splash and surface runoff with slope protection, such as punch straw, tackifier, or jute netting. [Hydro-mulch or other more recent methods for surface stabilization may also be used.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/N1600	Task c: Coordinate restoration activities with landowner.	12/04
	G5600/A7900/ Contractor	Task d: Monitor site work.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
8. Replant temporarily disturbed areas with a mixture of perennial grasses, forbs, brush, shrubs, and tree species that will provide effective erosion control. Prepare a firm, rough seedbed on fill or cut slopes and apply appropriate types and amounts of fertilizers and seed mixtures. Consider reseeding with native plants only in sensitive areas not subject to grazing. [Reseeding mixtures shall be landowner/manager approved; an approved seed mixture is provided in the specifications package.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/N1600	Task c: Coordinate restoration activities with landowner.	12/04
	G5600/A7900/ Contractor	Task d: Monitor site work.	12/04
9. Avoid causative construction operations during the wet season. Moist soil is generally more susceptible to compaction than dry soil. Minimize the use of heavy equipment on agricultural land to avoid soil compaction.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7900/ Contractor	Task c: Monitor site work.	12/04
10. Perform contour discharge or ripping operations at the conclusion of construction. This would loosen compacted soil and develop the seedbed for re-vegetation. [Agricultural areas only. Would increase natural vegetation damage and erosion potential in other areas.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/N1600	Task c: Coordinate restoration activities with landowner.	12/04
	G5600/A7900/ Contractor	Task d: Monitor site work.	12/04
11. In agricultural areas where sites would be graded, topsoil should be stockpiled. After construction, topsoil should be replaced and the site graded to the original contours. If appropriate, the site should be reseeded in accordance with agency or landowner objectives. ["Sites" refer to structure locations and access roads.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	N1600	Task c: Coordinate with landowner.	12/04
	G5600/A7900/ Contractor	Task d: Monitor site work.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
12. Add chemical additives to seedbed during re-vegetation to counteract potential chemical imbalances. [If specified by land management agencies.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7900/ Contractor	Task c: Monitor site work.	12/04
13. Base the tower design on geotechnical evaluation and sound geotechnical engineering practice, including analysis for cut and fill slopes, compaction requirements, and surface or slope drainage. [As a point of clarification, the structure foundations need to be based on geotechnical considerations.]	A7900	Task a: Incorporate requirement into construction specification – Division 2a.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7900? Contractor	Task c: Monitor site work.	12/04
14. Where possible, avoid road construction on very steep slopes to minimize surface erosion and slumping.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
15. Re-contour, prepare the surface, and seed all roads, construction sites, and other disturbed areas not required for project operation and maintenance.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	12/04
16. As much as possible, avoid construction activities and land surface disturbance in the immediate vicinity of unique plant communities and habitat features, such as remnant sand dunes, rock outcrops, riparian zones, alkali areas, other wetlands, kit fox natal dens, and raptor nesting cliffs. These unique features will be determined in consultation with the resource agencies.	Contractor/ A7400	Task a: Determine site-specific sensitive areas in the field.	Complete
	G5600/A7400	Task b: Ensure compliance with Biological Opinion; stake exclusion areas in the field.	Rolling schedule
	G5600/A7400/ Contractor	Task c: Monitor site work for compliance with BO.	12/04
17. Avoid construction activities in watercourses and wetlands since these areas are both infrequent and sensitive in the generally arid project area.	Contractor/ A7400	Task a: Determine site-specific sensitive areas in the field.	Complete
	G5600/A7400	Task b: Ensure compliance with Biological Opinion; stake exclusion areas in the field.	Rolling schedule
	G5600/A7400/ Contractor	Task c: Monitor site work for compliance with BO.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
18. Avoid work on unstable slopes and rock outcrops.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400? Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	12/04
19. Minimize surface disturbing activities such as grubbing, grading, ditching and filling to the extent possible.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600	Task c: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	12/04
20. Provide fire protection measures and avoid releases of fuels, oils, and other hazardous substances to the ground and water. [No smoking allowed at any time, anywhere on the project, with the sole exception of inside closed vehicles due to extreme fire danger. Butts shall remain inside the vehicles.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
21. Schedule activities to minimize construction in the specific vicinity of golden eagle nests or kit fox natal dens during the periods of greatest sensitivity, i.e. February through the end of the nesting or denning period.	Contractor/ A7400	Task d: Conduct spring biological surveys on access road locations and centerline relocations.	Complete
	G5600	Task e: Adjust structure and access road locations to avoid sensitive resources where necessary/possible.	Complete
	A7400/G5600	Task f: Ensure compliance with Biological Opinion; stake exclusion areas in the field.	Rolling schedule
	G5600/A7400/ Contractor	Task g: Monitor site work for compliance with BO.	12/04
22. Attach raptor nesting platforms to towers at intervals greater than one mile in raptor use areas. Place these on the towers in positions least likely to cause operation and maintenance problems. The number of nesting platforms would be determined during the transmission line alignment analysis. [In order to minimize impact on kit foxes and other listed species, raptor nesting platforms will not be installed in certain areas along the line. Use single pole steel structures with anti-perching devices in some areas to minimize raptor advantages. Desirability of raptor perching/nesting platforms will be determined in coordination with appropriate agencies and/or landowners, but perching/nesting platforms will not be placed in agricultural areas.]	A7900/A7400	Task a: Incorporate requirement into construction specification.	Complete
	A7400	Task b: Determine advisability of installing raptor perching/nesting platforms.	Complete
	G5600	Task c: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work.	12/04
23. Construction of staging areas and pulling sites should be located adjacent to roads where practical. Soil from construction activities should be properly disposed of.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
24. Construction should be timed whenever practical to minimize disruption of normal seasonal activities for both crop and range land.	A7900A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
25. Post-construction cleanup and removal practices detailed in Section 2.3.8 should be followed. [Access roads and crane pads may be re-seeded, but kept for maintenance use.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
26. Whenever possible shift construction areas (such as conductor pulling and splicing areas and construction yards) to nonagricultural land or less sensitive crops.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
27. Existing roads damaged by activities related to the transmission line should be repaired to a condition equal to or better than their condition prior to the construction of the transmission line.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
28. The limits of construction activities should normally be predetermined, with activity confined within those limits. All construction vehicle movement outside the right-of-way should normally be restricted to pre-designated access or public roads.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
29. No paint or permanent discoloring agents should be applied -to rocks or vegetation to indicate survey or construction activity limits. Survey markers, flagging, or other suitable material should be used to delineate limits.	A7900	Task a: Incorporate requirement into construction specification.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
30. Where blasting is required for access roads or tower footings, debris should be recovered and removed where practical.	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04
31. Excavated material or other construction materials should be removed following construction. [Will be done in agricultural areas. In grassland areas excavated materials will be spread around the structure base or used to level access road and or crane pad at the excavation site.]	A7400	Task a: Incorporate requirement into construction specification – Division 2a or 13.	Complete
	G5600	Task b: Advise construction contractor.	Complete
	G5600/A7400/ Contractor	Task c: Monitor site work.	12/04

Short-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
32. In construction areas where excavation is not required, vegetation should be left in place wherever possible and the original contours should be maintained in an undisturbed condition.	A7400 G5600/A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Identify areas where overland travel will suffice, and where new roads will be required. Task c: Advise construction contractor. Task d: Monitor site work; restore/re-seed where appropriate.	Complete Complete Complete 12/04
33. Where vegetation of high density or low diversity is encountered in the right-of-way, clearing to a harsh right-of-way edge should be avoided. Instead, it should be done to emulate natural clearings with irregular edges. [Since the right-of-way is either grassland or intensive agriculture, this provision will likely not be employed.]	A7400 G5600 G5600/A7400/ Contractor	Task a: Incorporate requirement into construction specification – Division 2a or 13. Task b: Advise construction contractor. Task c: Monitor site work.	Complete Complete 12/04
34. PG&E will provide clear information about right-of-way acquisition, construction and maintenance activities, and project schedules. [Western will perform these tasks.]	N1600	Task a: Coordinate with landowners.	Open

Table 4.3: Long-term Mitigation Commitments and Action Plan for the Path 15 Transmission Project

Long-term Mitigation Commitment	Responsible Party	Action	Target Completion Date
1. Avoid permanent access road clearing to the extent possible, allowing the short annual grasses to cover the ground surface.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	12/04
2. All access roads not required for maintenance should be either permanently closed using the most effective and least environmentally damaging methods appropriate to the landowners, or be re-graded, put to bed, and re-vegetated with concurrence of landowner.	A7400	Task a: Incorporate access road design requirements into construction specification – Division 2a or 13.	Complete
	G5600/A7400	Task b: Identify existing roads to be used, and additional access needs.	Complete
	G5600	Task c: Identify areas where overland travel will suffice, and where new roads will be required.	Complete
	G5600/A7400/ Contractor	Task d: Monitor site work; restore/re-seed where appropriate.	12/04 / Open
3. An ambient noise survey will be conducted at selected, sensitive sites along the route prior to construction and operation of the line. These measurements will then be available if complaints are received after the line is placed in operation. [Due to the remote location of the proposed transmission line route the need for this survey will be minimal.]	N1600/N5000	Task a: Identify locations where ambient noise could potentially be a problem.	Open
	N1600/N5000	Task b: Take field readings.	Open
	N1600/N5300	Task c: Respond to post-construction noise complaints.	As needed.
	N5300	Task d: Replace damaged insulators or conductor if found to be the cause.	As needed.

4. PG&E will resolve AM radio and television interference complaints and make every reasonable effort to promptly correct the cause of the interference when it has been established that this interference is from PG&E facilities. [Western will conduct this activity, unless the problem is PG&E substation equipment.]	N1600/N5300 N5300	Task a: Respond to post-construction noise complaints. Task b: Replace damaged insulators or conductor if found to be the cause.	As needed. As needed.
5. To provide a basis for evaluating and correcting any adverse effects caused by the transmission line, radio and TV field strength measurements will be made after the selection of the final transmission line alignment, prior to construction and operation of the transmission line. If complaints are received after operation of the line, PG&E will be able to take corrective measures to provide satisfactory service. [Due to the remote location of the proposed transmission line route the need for this survey will be minimal. Western will address any interference issues as they may arise.]	N1600 N1600/N5000 N1600/N5300 N5300	Task a: Identify locations where transmission line interference could potentially be a problem. Task b: Take field readings. Task c: Respond to post-construction interference complaints. Task d: Replace damaged insulators or conductor if found to be the cause.	Open Open As needed. As needed.

Note: All dates are keyed to the September 29, 2003 Project Schedule, and are subject to change as the Project Schedule is updated, or as tasks are completed.

Attachment 1

Mitigation Monitoring

Policy: Western will ensure that we fulfill our commitments to mitigate the environmental effects of our activities.

Background: Western routinely commits to specific actions for the protection of cultural and biological components of the environment from adverse effects of our activities. For example, before a pole-replacement project, Western might locate an endangered plant community on the transmission right-of-way. The NEPA document for the project would most likely specify that the maintenance crews would avoid the plants. Western routinely commits to implement stormwater pollution prevention strategies, reduce visual impacts, undertake erosion control, limit use of pesticides, and avoid cultural sites, wetlands, riparian areas and other important habitats.

Such commitments often expedite the clearance process and allow Western to proceed with minimum expense and delay. A project, which would otherwise require an EA/FONSI, might be cleared with a CX because Western committed to avoid important environmental resources, thus eliminating adverse effects. In addition, meeting these commitments enhances Western's reputation for responsible environmental stewardship with regulators, land managing agencies, Native American tribes, and private landowners.

To preserve these benefits, Western must ensure that we carry out the mitigation actions to which we commit.

When Western makes mitigation commitments, DOE requires a mitigation action plan that describes how mitigation will be planned and implemented. In such projects, annual mitigation reporting is required and will be submitted with Western's Annual Site Environmental Report. The reporting is required until the mitigation is completed.

Process: Western will audit selected projects that have the following characteristics for mitigation compliance:

National Register eligibility of cultural resources; presence of fossils
Sensitivity and importance of biological resources present
Size and scope of project
Interest from stakeholders
Mitigation reporting requirements

In addition, some projects will be selected at random.

Western will keep records in each regional office of monitored projects and findings, and use this information at least annually to assess the effectiveness of mitigation methods and the effectiveness of its processes for ensuring that mitigation is carried out as

planned. Western will take corrective action as soon as deficiencies are identified, and report the results of mitigation monitoring in the Annual Site Environmental Report.

APPENDIX F

MITITAGION ACTION PLAN
HOOVER DAM BYPASS PROJECT

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MITIGATION ACTION PLAN

for the

MODIFICATION AND CONSTRUCTION OF TRANSMISSION LINES FOR THE U.S. HOOVER DAM BYPASS PROJECT – PHASE II, HOOVER DAM AND BOULDER CITY, NEVADA

(DOE/EA-1478)

WESTERN AREA POWER ADMINISTRATION

October 2003

Western Area Power Administration

Mitigation Action Plan

1.0 HISTORY AND BACKGROUND

The Western Area Power Administration (Western) prepared an Environmental Assessment (EA) (DOE/EA-1478) for the Modification and Construction of Transmission Lines for the U.S. Hoover Dam Bypass Project, referred to as Phase II (Project). Based on the EA, Western has determined that the proposed Project would not result in any significant environmental impacts, and the preparation of an environmental impact statement (EIS) will not be required. The basis for this determination is described in the Finding of No Significant Impact issued in October 2003.

Western proposes to double-circuit a portion of the Hoover-Mead #5 and #7 230-kV Transmission Lines with the Henderson-Hoover 230-kV Transmission Line newly renamed Henderson-Mead #1. The double circuiting will be in the area of Hoover Dam and Mead Substation. In addition, a fiber optic cable will be placed extending from the Hoover Power Plant to Mead Substation mainly carried along on the new double-circuited structures. The modifications and construction to the transmission lines and placement of the fiber optic cable would be completed in 2004. A number of environmental protection measures are included with the proposed action to minimize potential adverse environmental effects.

The requirements for preparing a Mitigation Action Plan (MAP) are specified in 10 CFR part 1021 (Section 331(b), Department of Energy National Environmental Policy Act Implementing Procedures). These guidelines state that DOE shall prepare a MAP for commitments to mitigations that are essential to render the impacts of a proposed action not significant. The guidelines further state that the MAP shall also explain how mitigation will be planned and implemented. The EA analyzed the impacts of the proposed Project. Western has determined that five mitigation measures are essential to render the impacts of the proposed action not significant: 1) mitigating impacts to historic facilities, 2) avoiding and mitigating impacts to archaeological sites during construction, 3) avoiding and monitoring for the Mojave Desert tortoise, 4) avoiding and monitoring for the Gila monster, and 5) avoiding and monitoring for the peregrine falcon.

2.0 FUNCTION AND ORGANIZATION OF THE MITIGATION ACTION PLAN

The following sections describe the plans and actions by which Western will implement and verify mitigation action commitments described above.

Section 3.0 describes the monitoring and verification of mitigation actions and the reporting requirements. Section 4.0 describes the mitigation commitments and action plans for the Project. The commitment to the mitigation is presented along with an action plan composed of the tasks, responsible party, and schedule anticipated for the mitigation.

3.0 MITIGATION ACTION PLAN MONITORING AND REPORTING SYSTEM

Section 5.d. (11) (f) of DOE Order 451.1B, National Environmental Policy Act Compliance Program, requires Western to report MAP activities in its Annual Site Environmental Report (Annual Report), published by January 31 of each year. The Annual Report will reflect new information or changed circumstances. If major changes to mitigation included in this MAP are necessary, these changes will be described in the Annual Report. The Annual Report will be made available to the public.

A member of Western's environmental staff will verify mitigation results and determine if the mitigation actions achieved their intended purpose. Existing organizational and administrative controls will be used to gather information regarding implementation and status of mitigation actions. Such controls include applicable reporting systems, inspection, and verification. The results of inspection and verification will be reported on the anniversary of the MAP in the Annual Report. When mitigation actions are completed and verified, the information will be included in the Annual Report.

4.0 MITIGATION COMMITMENTS AND ACTION PLANS

Mitigation practices were defined for the Project in the EA and were considered during the assessment of impacts of the Project. Measures not addressed as part of this MAP will be implemented as part of Western's standard business and environmental program practices.

Table 4.1 outlines the mitigation measures to reduce impacts to less than significant and action items necessary to assure the mitigation is implemented to protect important cultural resource sites (archaeological and historical), and sensitive wildlife species (Mojave Desert tortoise, Gila monster and peregrine falcon).

TABLE 4.1 **MITIGATION MEASURES**		**WESTERN ACTIONS NEEDED TO AVOID SIGNIFICANT IMPACT.**
Cultural Resources (archaeological)	Sites subject to impacts from construction activities would be monitored during structure replacement and fiber optic installation activities. Archaeological and Tribal monitors will be used to ensure that the two newly recorded prehistoric sites eligible to the National Register of Historic Places are avoided and project activities are modified to mitigate any impact.	1. Western will assure an Archaeological monitor and Tribal monitor will present pre-construction training to all project construction crews, explaining the importance of the sites and the reason for protecting and respecting these sites and similar sites within the area. 2. Site 26CK6725 is a multiple rock ring site. Western will require that project activities, personnel and equipment will not access the site other than to allow the construction contractor to place a rope on the ground during the conductor pulling process. The rope may be laid across the site, but not pulled. The rope will be placed by hand under the supervision of an archaeological monitor.

TABLE 4.1 MITIGATION MEASURES		WESTERN ACTIONS NEEDED TO AVOID SIGNIFICANT IMPACT.
		3. Site 26CK6726 is a monolith rock shelter. Western will require that project activities, personnel and equipment will not access the site except under supervision of the archaeological monitor. The structure due for replacement will not be accessed by the current spur access road but rather, a new spur access road that will be constructed from the northeast toward the existing access road. Development, use and rehabilitation of the new spur access road will be supervised by the archaeological monitor and a tribal monitor. The new access spur road will be approximately 80 feet long and 12 feet wide. Fill from an approved area will be brought in to create the new spur access road and will not be pulled from the adjoining areas. Western's construction contractor will be using a large crane to remove sections of the current structure tower. These sections will be unbolted and lowered to ground level away from the rock shelter site in order to complete the remaining disassembly. The reverse will occur for the placement of the new monopole structure. The sections will be assembled at ground level away from the rock shelter and the crane will move the structure sections into place.
Cultural Resource (historical)	Historic facilities subject to impacts from construction will be mitigated through documentation.	1. Western will assure that the Hoover-Mead #5 and #7 230-kV Transmission Lines will be documented in the amended Historic American Engineering Record for Hoover Dam and a draft provided to the Nevada State Historic Preservation Office.
Wildlife (Mohave Desert tortoise)	Protection of the Mojave Desert tortoise. Western and the U.S. Fish and Wildlife Service (USFWS) have identified areas of tortoise habitat the southern 5.2 miles of the project area. This area will be surveyed and monitored for the present of the Mojave Desert tortoise during this project so as to reduce possible harm or injury to the Mojave Desert tortoise.	1. Western will assure that a qualified tortoise biologist will train all project personnel prior to access to the project area on the identification, habitat, and protection measures employed for this project to ensure that desert tortoises are not inadvertently harmed. 2. A qualified tortoise biologist will conduct preconstruction surveys prior to the start of project activities at each work location to include but not limited to pad sites, staging areas and access routes anytime during the year.

TABLE 4.1 MITIGATION MEASURES		WESTERN ACTIONS NEEDED TO AVOID SIGNIFICANT IMPACT.
		3. A qualified tortoise biologist will be present for survey and monitoring from March 15-October 15 (active season) during surface-disturbing activities to ensure that desert tortoises are not inadvertently harmed. 4. A qualified tortoise biologist will be on-call for survey and monitoring from October16-March 14 (inactive season) during surface disturbing activities to ensure that desert tortoises are not inadvertently harmed. 5. Herbicides shall not be used in the project area. 6. Vehicular traffic shall be restricted to existing access roads and new constructed assess spur roads or those approved by Western in consultation with the USFWS. 7. Vehicles shall not exceed 15 miles per hour speed limit on non-public access roads. 8. All project activities will be confined to designated areas and blading of vegetation shall only occur in limited areas designated for that purpose by the qualified tortoise biologist. 9. All litter shall be restricted to disposal in covered raven-proof trash receptacles and the trash removed daily. 10. Fully implement all measures, including the reasonable and prudent measures, terms and conditions, reporting requirements, and reinitiation requirements in the biological opinion issued October 22, 2003 by the USFWS.
Wildlife (Gila monster)		1. Western will ensure implementation of the "Gila Monster Protocol for Minimizing Impacts on Construction Sites," by the biological monitor on-site for the Mojave Desert tortoise.
Wildlife (peregrine falcon)		1. Western will coordinate with the Federal Highway Administration on a monitoring program and restrict construction during the breeding season if an active peregrine falcon nest is located within one-quarter mile of the project area.

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APPENDIX G

MITITAGION ACTION PLAN
EXIRA STATION

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APPENDIX A
MITIGATION ACTION PLAN

MITIGATION ACTION PLAN

for the

EXIRA STATION PROJECT

(DOE/EA-1474)

WESTERN AREA POWER ADMINISTRATION

July 2003

Western Area Power Administration

Mitigation Action Plan
Exira Station

1.0 HISTORY AND BACKGROUND

Western Area Power Administration (Western) prepared an Environmental Assessment (EA) (DOE/EA-1474) for the interconnection of the Exira Station (Project), an electric generating peaking facility, to Western's transmission system. Missouri River Energy Services (MRES), on behalf of Western Minnesota Municipal Power Agency (WMMPA), applied to Western to interconnect the Project to Western's Denison-Creston 161-kilovolt (kV) Transmission Line. The project is located in Audubon County, Iowa on land purchased by WMMPA. Based on the EA, Western has determined that the proposed Exira Station Project would not result in any significant environmental impacts, and the preparation of an environmental impact statement (EIS) will not be required. The basis for this determination is described in the Finding of No Significant Impact dated July 2003.

Western's action for the Project would involve modifications to its transmission system to accommodate the additional power generated at the new peaking facility. Modifications would include:

1. Constructing a new switching station adjacent to the peaking facility.
2. Constructing about 2,000 feet of new transmission line and associated tie into the Denison-Creston 161-kV Transmission Line.
3. Making minor modifications to its existing communication system to facilitate operating the new switching station.

MRES' actions for the proposed Project include:

1. Constructing and operating the Exira Station, a peaking generation facility containing two simple cycle gas-fired combustion turbines.
2. Constructing and operating an interconnecting pipeline with Northern Natural Gas Company's interstate gas pipeline.
3. Drilling of up to seven groundwater wells to supply water for the plant's cooling water system and for water injection to the combustion turbines.
4. Constructing a 2,500 foot access road to the facility.
5. Constructing two stormwater catch basins. One would expand an existing small man-made wetland on the Project site.
6. Installing ancillary equipment including water holding tanks, cooling system, fences, communication systems, and electrical equipment.

The requirements for preparing a Mitigation Action Plan (MAP) are specified in 10 CFR 1021 (Section 331(a), Department of Energy National Environmental Policy Act Implementing Procedures). These guidelines state that DOE shall prepare a MAP for commitments to mitigations that are essential to render the impacts of a proposed action not significant. The guidelines further state that the MAP shall also explain how mitigation will be planned and implemented. The EA analyzed the impacts of the proposed Project. Two mitigation measures were described that are essential to render the impacts of the proposed action not significant: 1) protection of the Henslow sparrow, an Iowa State threatened species and 2) protection of neighboring groundwater wells from impacts associated with use of groundwater by the proposed Project.

2.0 FUNCTION AND ORGANIZATION OF THE MITIGATION ACTION PLAN

The following sections describe the plans and actions by which Western will implement and verify mitigation action commitments expressed in the FONSI.

Section 3.0 describes the monitoring and verification of mitigation actions and the reporting requirements. Section 4.0 describes the mitigation commitments and action plans for the Project. The commitment to the mitigation specified in the FONSI is presented along with an action plan composed of the tasks, responsible party, and schedule anticipated for the mitigation.

3.0 MITIGATION ACTION PLAN MONITORING AND REPORTING SYSTEM

Section 5.d. (11)(f) of DOE Order 451.1B, National Environmental Policy Act Compliance Program, requires Western to report MAP activities in its Annual Site Environmental Report, published by January 31 of each year. This annual report will reflect new information or changed circumstances. If major changes to mitigation included in this MAP are necessary, these changes will be described in the annual report. The annual report will be made available to the public.

A member of Western's environmental staff will verify mitigation results and determine if the mitigation actions achieved their intended purpose. Existing organizational and administrative controls will be used to gather information regarding implementation and status of mitigation actions. Such controls include applicable reporting systems, inspection, and verification. The results of inspection and verification will be reported on the anniversary of the MAP in the Annual Report. When mitigation actions are completed and verified, the information will be included in the Annual Report.

4.0 MITIGATION COMMITMENTS AND ACTION PLANS

Mitigation practices were defined for the Project in the EA and were considered during the assessment of impacts of the Project. Western maintains standard mitigative practices for the construction of transmission lines and substations (Construction Standard 13, Environmental Quality Protection). These standards are also applicable to construction of the plant and associated facilities. Additional mitigation is proposed by MRES to reduce impacts associated with plant construction and operation. These mitigation measures are identified in Table 2.5-1 of

the EA. With the exception of the mitigation measures for protection of the Henslow sparrow and neighboring groundwater wells, these measures will be implemented by Western and MRES as part of their standard operating procedures.

Table 4.1 outlines the mitigation measures to reduce impacts to less than significant and action items necessary to assure the mitigation is implemented to protect the Henslow sparrow and the neighboring groundwater wells.

TABLE 4.1 MITIGATION MEASURES FOR EXIRA STATION		APPLICABILITY	
		MRES Responsibility **(Plant Site, Switch-yard, Natural Gas Pipeline and Interconnect, Access Road)**	**Western Responsibility** **(Transmission Line and Interconnect)**
Water	MRES shall conduct a groundwater pump test to determine the potential impacts of producing groundwater from the property. If the test results indicate a potential for significant impact to adjacent residential groundwater users, MRES would implement mitigation measures to resolve these impacts. Western will monitor the pump test and any mitigation measures developed to assure there are no significant impacts to adjacent residential groundwater users.	**Action:** Provide Western with a copy of the plan for pump testing for review. **Action:** Provide Western with a letter report of pump test results. **Action:** Provide Western with plans for mitigation measures to resolve impacts to adjacent residential groundwater wells	**Action:** Review plans for groundwater pump test. **Action:** Review pump test results for impact to wells. **Action:** Review mitigation measures to assure there are no significant impacts.
Biology	In accordance with Iowa Department of Natural Resources (IDNR) agreement for protection of the Henslow sparrow:		
	1) Prior to Project construction, MRES would identify any Henslow's sparrow nest locations and confirm whether nesting activities are complete. Western would determine what appropriate actions would be taken based on nesting status.	**Action:** Conduct biological survey to locate any Henslow sparrow nests; prepare letter report of results and submit to Western and IDNR prior to construction.	**Action:** Review MRES report and determine if further actions need to be taken.
	2) Within a few days of the survey, the areas to be disturbed will be mowed if no Henslow sparrows are found.	**Action:** If no Henslow sparrows are found during the survey, mow the areas to be disturbed.	N/A
	3) Prior to spring 2004, coordinate with IDNR and the Farm Services Administration (FSA) to determine what additional actions are required during operations for protection of the Henslow sparrow.	**Action:** By March 2004, submit a letter report to Western that includes what measures will be taken during operation for protection of the Henslow sparrow. **Action:** Incorporate actions into standard operating procedures (SOP) for plant operations.	**Action:** Review letter report to assure measures are appropriate and have been coordinated with IDNR and FSA. N/A

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APPENDIX H

MITITAGION ACTION PLAN
WOLF POINT – WILLISTON TRANSMISSION LINE REBUILD

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APPENDIX A2

Standard Mitigative Measures for Construction, Operation, and Maintenance of Transmission Lines

APPENDIX A2. STANDARD MITIGATIVE PRACTICES

Mitigation

Measure

1. The contractor shall limit the movement of its crews and equipment to the right-of-way (ROW), including access routes. The contractor shall limit movement on the ROW so as to minimize damage to grazing land, crops, or property, and shall avoid marring the land.

2. When weather and ground conditions permit, the contractor shall obliterate all contractor-caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded, or otherwise eliminated in an approved manner. In hay meadows, alfalfa fields, pastures, and cultivated productive lands, ruts, scars, and compacted soils shall have the soil loosened and leveled by scarifying, harrowing, discing, or other approved methods. Damage to ditches, tile drains, terraces, roads, and other features of the land shall be corrected. Before final acceptance of the work in these agricultural areas, all ruts shall be obliterated, and all trails and areas that are hard-packed as a result of contractor operations shall be loosened, leveled, and reseeded. The land and facilities shall be restored as nearly as practicable to their original conditions.

3. Water bars or small terraces shall be constructed across all ROW and access roads on hillsides to prevent water erosion and to facilitate natural revegetation.

4. The contractor shall comply with all Federal, State, and local environmental laws, orders, and regulations. Prior to construction, all supervisory construction personnel and heavy equipment operators will be instructed on the protection of cultural and ecological resources.

5. The contractor shall exercise care to preserve the natural landscape and shall conduct its construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment. The edges of clearings and cuts through tree, shrubbery, or other vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Where such clearing occurs in the Lake Mead National Recreation Area, the contractor shall consult with the on-site Park Representative.

6. On completion of the work, all work areas except access roads shall be scarified or left in a condition which will facilitate natural revegetation, provide for proper drainage, and prevent erosion. All destruction, scarring, damage, or defacing of the landscape resulting from the contractor's operations shall be repaired by the contractor.

7. Construction staging areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On abandonment, all storage and construction buildings, including concrete footings and slabs, and all construction materials and debris

shall be removed from the site. The area shall be regraded as required so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.

8. Borrow pits shall be excavated so that water will not collect and stand therein. Before being abandoned, the sides of borrow pits shall be brought to stable slopes, with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area giving a natural appearance. Waste piles shall be shaped to provide a natural appearance.

9. Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter contaminants, debris, any other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and waste include, but are not restricted to refuse, garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailing, mineral salts, and thermal pollution.

10. Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses, shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means.

11. Excavated material or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines, or other watercourse perimeters where they can be wasted away by high water or storm runoff or can in any way encroach upon the actual watercourse itself.

12. Waste waters from concrete batching, or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates, or other approved methods. Any such waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these specifications, settleable material as defined as that material which will settle from the water by gravity during a 1-hour quiescent detention period.

13. The contractor shall utilize such practicable methods and devices as are reasonably available to control, present, and otherwise minimize atmospheric emissions or discharges of air contaminants.

14. The emission of dust into the atmosphere will not be permitted during the manufacture, handling, and storage of concrete aggregate, and the contractor shall use such methods and equipment as necessary for the collection and disposal, or prevention, of dust during these operations. The contractor's methods of storing and handling cement and pozzolans shall also include means of eliminating atmospheric discharges of dust.

15. Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or other inefficient operating conditions, shall not be operated until repairs or adjustments are made.

16. The contractor shall prevent any nuisance to persons or damage to crops, cultivated fields, and dwellings from dust originating from his operations. Oil and other petroleum derivatives shall not be used for dust control. Speed limits shall be enforced, based on road conditions, to reduce dust problems.

17. To avoid nuisance conditions due to construction noise, all internal combustion engines used in connection with construction activity shall be fitted with an approved muffler and spark arrester.

18. Burning or burying waste materials on the ROW or at the construction site will be permitted if allowed by local regulations. The contractor shall remove all other waste materials from the construction area. All materials resulting from the contractor's clearing operations shall be removed from the ROW.

19. The contractor shall make all necessary provisions in conformance with safety requirements for maintaining the flow of public traffic and shall conduct its construction operations to offer the least possible obstruction and inconvenience to public traffic.

20. Western will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW, to the mutual satisfaction to the parties involved.

21. Structures will be carefully located to avoid sensitive vegetative conditions, including wetlands, where practical.

22. ROW will be located to avoid sensitive vegetation conditions including wetlands where practical, or, if they are linear to cross them at the least sensitive feasible point.

23. Removal of vegetation will be minimized to avoid creating a swath along the ROW.

24. Topsoil will be removed, stockpiled, and respread at all heavily disturbed areas not needed for maintenance access.

25. All disturbed areas not needed for maintenance access will be reseeded using mixes approved by the landowner or land management agency.

26. Erosion control measures will be implemented on disturbed areas, including areas that must be used for maintenance operations (access ways and areas around structures).

27. The minimum area will be used for access ways (12 feet to 15 feet wide, except where roadless construction is used).

28. Structures will be located and designed to conform with the terrain. Leveling and benching of the structure sites will be the minimum necessary to allow structure assembly and erection.

29. ROW will be located to utilize the least steep terrain and, therefore, to disturb the smallest area feasible.

30. Careful structure location will ensure spanning of narrow flood prone areas.

31. Structures will not be sited on any potentially active faults.

32. Structure sites and other disturbed areas will be located at least 300 feet, where practical, from rivers, streams (including ephemeral streams), ponds, lakes, and reservoirs.

33. New access ways will be located at least 300 feet, where practical, from rivers, ponds, lakes, and reservoirs.

34. At crossings of perennial streams by new access ways, culverts of adequate size to accommodate the estimated peak flow of the stream will be installed. Construction areas will minimize disturbance of the stream banks and beds during construction. The mitigation measures listed for soil/vegetation resources will be performed on areas disturbed during culvert construction.

35. If the banks of ephemeral stream crossings are sufficiently high and steep that breaking them down for a crossing would cause excessive disturbance, culverts will be installed using the same measures as for culverts on perennial streams.

36. Blasting will not be allowed.

37. Power line structures will be located, where practical, to span small occurrences of sensitive land uses, such as cultivated areas. Where practicable, construction access ways will be located to avoid sensitive conditions.

38. ROW will be purchased at fair market value and payment will be made of full value for crop damages or other property damage during construction or maintenance.

39. The Power line will be designed to minimize noise and other effects from energized conductors.

40. The precise location of all structure sites, ROW, and other disturbed areas will be determined in cooperation with landowners or land management agencies.

41. Crossing of operating railroads by construction vehicles or equipment in a manner that would cause delays to railroad operations will be avoided. Construction will be coordinated with railroad operators. Conductors and overhead wire string operations would use guard structures to eliminate delays.

42. Before construction, Western will perform a Class III (100 percent of surface) cultural survey on all areas to be disturbed, including structure sites and new access ways. These surveys will be coordinated with the appropriate land owner or land management agency. A product of the survey will be a Cultural Resources Report recording findings and suggesting mitigation measures. These findings will be reviewed with the State Historic Preservation Offices and other appropriate agencies, and specific mitigation measures necessary for each site or resource will be determined. Mitigation may include careful relocation of access ways, structure sites, and other disturbed areas to avoid cultural sites that should not be disturbed, or data recovery.

43. The contractor will be informed of the need to cease work in the location if cultural resource items are discovered.

44. Construction activities will be monitored or sites flagged to prevent inadvertent destruction of any cultural resource for which the agreed mitigation was avoidance.

45. Construction crews will be monitored to the extent possible to prevent vandalism or unauthorized removal or disturbance of cultural artifacts or materials from sites where the agreed mitigation was avoidance.

46. Should any cultural resources that were not discovered during the Class III Survey be encountered during construction, ground disturbance activities at that location will be suspended until the provisions of the National Historic Preservation Act and enabling legislation have been carried out.

47. Construction activities will be monitored or significant locations flagged to prevent inadvertent destruction of any paleontological resource for which the agreed mitigation was avoidance.

48. Clearing for the access road will be limited to only those trees necessary to permit the passage of equipment.

49. The access road will follow the lay of the land rather than a straight line along the ROW where steep features would result in a higher disturbance.

APPENDIX I

ENVIRONMENTAL PERMITS

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APPENDIX I

ENVIRONMENTAL PERMITS

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LIST OF ENVIRONMENTAL PERMITS
OBTAINED OR ONGOING DURING CALENDAR YEAR 2004

NAME	ISSUING AGENCY	STATUS	EXPIRATION DATE
404 Permit (Clean Water Act)			
Cottonwood Creek	USACE	Complete	2/15/03
Path 15 (Los Banos-Gates Transmission Project)	USACE	Open	6/18/2005
Migratory Bird Treaty Act/Eagle Protection Act			
Removal of raptor and raven nests (Colorado)	USFWS	Complete	Complete
Removal of bird nests (California)	USFWS	Ongoing	Open
Removal of bird nests (Arizona)	USFWS	Ongoing	Open
Hazardous Waste			
Hauler Registration	California Dept. of Toxic Substances Control Transporter	Renewed	Open
Transporter Permit	North Dakota Department of Health	Ongoing	10/07/09
Permit to Operate			
Underground Storage Tank	Arizona Department of Environmental Quality	Ongoing	Annually
Diesel Tank for Backup Generator	Colorado State Inspector of Oil	Ongoing	Annually
Hazardous Materials Permit			
Hazardous Materials Business Plans	Alameda County (4)	Ongoing	Annually
	Calavaras County (1)	Ongoing	Annually
	Colusa County (2)	Ongoing	Annually
	Contra Costa County (2)	Ongoing	Annually
	Fresno County (1)	Ongoing	Annually
	Glenn County (1)	Ongoing	Annually
	Kern County (1)	Ongoing	Annually
	Lassen County (2)	Ongoing	Annually
	Mendocino County (1)	Ongoing	Annually
	Merced County (5)	Ongoing	Annually
	Modoc County (2)	Ongoing	Annually
	Napa County (1)	Ongoing	Annually
	Placer County (1)	Ongoing	Annually
	Plumas County (1)	Ongoing	Annually
	Sacramento County (3)	Ongoing	Annually
	San Joaquin County (4)	Ongoing	Annually
	San Mateo (2)	Ongoing	Annually

NAME	ISSUING AGENCY	STATUS	EXPIRATION DATE
Hazardous Materials Business Plans (cont.)	Santa Clara County (4)	Ongoing	Annually
	Shasta County (11)	Ongoing	Annually
	Sierra (1)	Ongoing	Annually
	Solano (1)	Ongoing	Annually
	Stanislaus (1)	Ongoing	Annually
	Sutter (1)	Ongoing	Annually
	Tehama County (4)	Ongoing	Annually
	Yolo County (3)	Ongoing	Annually
Hazardous Waste Generation Permit (separate permits for 21 facilities)	Arizona State Department of Environmental Quality	Ongoing	Annually
HazMat Storage Permit	Nevada State Fire Marshall	Ongoing	Annually
Water Quality			
Septic Tank Permit	Nevada Bureau of Water Pollution Control	Ongoing	Annual
Clean Air Permits			
Facility Permit – generator	Sacramento Metropolitan Air Quality Management District, California	Ongoing	Annually
Air Quality Permit – Logan Creek Microwave Facility	Glenn County Air Pollution Control District, Arizona	Ongoing	Annually
Air Quality Permit	Maricopa County, Arizona	Ongoing	Annually
Diesel Dispensing			
Facility Permit	Bay Area Air Quality Management District	Ongoing	Annually
Facility Permit	Shasta County Air Quality Management District	Ongoing	Annually
Facility Permit	Sacramento Metropolitan Air Quality Management District	Ongoing	Annually
Gasoline Dispensing			
Facility Permit	Bay Area Air Quality Management District	Ongoing	Annually
Facility Permit	Shasta County Air Quality Management District	Ongoing	Annually
Facility Permit	Sacramento Metropolitan Air Quality Management District	Ongoing	Annually

APPENDIX J

2004 POLLUTION PREVENTION AND WASTE MINIMIZATION REPORT

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Recycling Data Report for CY 2004

Western Area Power Administration for CY 2004

Recycle Category	Quantity
Paper Products:	
Office and Mixed Paper	75.20 mt
Corrugated cardboard	14.93 mt
Phone Books	2.72 mt
Newpapers/Magazines	3.30 mt
Scrap Metals:	
Stainless steel	0 mt
Copper	42.45 mt
Iron/Steel	784.29 mt
Aluminum	133.04 mt
Aluminum Cans	0.32 mt
Lead	0.00 mt
Zinc	0.00 mt
Other: (see discussion below)	0.00 mt
Precious metals:	
Silver	0.00 mt
Gold	0.00 mt
Platinum	0.00 mt
Other: (see discussion below)	0.00 mt
Other Items:	
Antifreeze	0.50 mt
Engine oils	5.91 mt
Toner cartridges	0.96 mt

Batteries	20.70 mt
Tires	2.76 mt
Food waste	0.00 mt
Concrete/Asphalt	20.40 mt
Fluorescent Bulbs	0.45 mt
Ballasts	0.00 mt
Glass	0.00 mt
Plastic	0.00 mt
Styrofoam	0.00 mt
Transformers	153.37 mt
Wood (chips, compost)	0.00 mt
Computers/Electronics	5.14 mt
Other: (see discussion below)	1005.97 mt

Explanation for other amounts: Explanation for other amounts: Mineral Oil Dielectric Fluid = 317.92 mt; Wood Poles and Crossarms = 682.1 mt; Porcelain/Ceramic = 2.04 mt; Freon = 0.01 mt; Fiberglass Microwave Building = 0.9 mt; Paint = 0.2 mt; Soil (landfarmed) = 1mt; Wood = 1.4 mt; Solvent = 0.4 mt

Sanitary Waste

Routine	Cleanup/Stabilization
1369.63 mt	0.00 mt

Waste Generation Report for CY 2004

Radioactive wastes reported in cubic meters (m3); Hazardous and Sanitary wastes reported in metric tons (mt)

Displaying sites: Western Area Power Administration

Western Area Power Administration

Waste Type	Routine Waste	Cleanup/Stabilization Waste	Total Waste
High Level Waste	0	0	0
Transuranic Waste	0	0	0
Mixed Transuranic Waste	0	0	0
Low Level Waste	0	0	0
Mixed Low Level Waste	0	0	0
RCRA Waste	1.08	0	1.08
State Regulated Waste	12.23	0	12.23
TSCA Waste	57.82	0	57.82
Mixed TSCA Waste	0	0	0

Grand Total for selected sites

Waste Type	Routine Waste	Non-Routine Waste	Total Waste
High Level Waste	0	0	0
Transuranic Waste	0	0	0
Mixed Transuranic Waste	0	0	0
Low Level Waste	0	0	0
Mixed Low Level Waste	0	0	0
RCRA Waste	1.08	0	1.08
State Regulated Waste	12.23	0	12.23
TSCA Waste	57.82	0	57.82
Mixed TSCA Waste	0	0	0

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